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THE
CANADIAN JOURNAL
OF
MEDICINE AND SURGERY

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF
MEDICINE AND SURGERY

J. J. CASSIDY, M.D., EDITOR.

VOL. XII.
JULY TO DECEMBER, 1902

BUSINESS MANAGER
W. A. YOUNG, M.D., L.R.G.P.LOND.
145 COLLEGE ST., TORONTO, CAN.

1902

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VOL. XII.

TORONTO, JULY, 1902.

NO. 1.

Original Contributions.

THE HUMORS OF A SHIP'S PRACTICE.*

BY E. H. STAFFORD, M.D.

IN a branch of learning so practical as medicine all actual experience has value; and, indeed, where the active profession has been cut up into so many separate fields of practice, the ultimate principles of action arrived at by the whole must in large measure be founded upon the correlative evidence adduced by the parts. In view of this fact, and at the suggestion of the late Dr. Harvey, of St. Johns, the rather copious notes taken in a recent voyage in the North Atlantic, as surgeon on one of the sealing ships, have been arranged for the medical reader in a manner which, it is hoped, will render a newly-treated subject acceptable.

The argument may be stated significantly in a word. In the month of March, which is sometimes intensely cold in this latitude, the sealing fleet sails for the ice with between two and three hundred men on each vessel, and about five thousand in all. The cruise lasts one or two months, and the work of the sealer consists in killing young or old seals on the ice with a gaff or a rifle, skinning them with a knife, and dragging the skins thus obtained over the ice, which is usually in broken or loosely-floating pieces, to the ship or to a common place of deposit. While thus engaged, the sealer is in the open air for a great portion of the day, and sometimes for a large part of the night as well. His food and drink are provided by the ship. He is quartered in the forecabin and in improvised berths in the hold.

* Written specially for THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

The work of the seal-killer, like the work of the miner, lumberman, railroadman, and vaquero, is violent, full of hardships, and not devoid of peril. It is for this reason of paramount importance that only those of robust constitution should present themselves for such employment. On the other hand, the duration of the cruise is so brief that a powerful man may be reasonably expected to endure for a short time many privations and inconveniences which could not be permanently asked of him.

The cases of disease or injury which come under the notice of the ship's surgeon are fourfold: Cases of debility or sickness, where the patient was in a weak condition before he came on board; instances of disease following exposure to the severity of the climate; injuries of a surgical nature received after coming on shipboard, and epidemics and constitutional diseases due to the unsanitary habits of the men or faulty condition of a particular ship.

Influenced by the abundant remuneration which often falls to the share of each sealer after a successful voyage, many men who are in debilitated health or who are even suffering from actual disease at the time, offer themselves confidently for employment upon the sealing vessels, and embark upon the cruise, either hoping that in spite of this handicap they may be enabled to perform the duties expected of them, or wantonly indifferent as to whether they shall make themselves useful or not, since all alike receive the same portion, irrespective of labor done.

In either case patients of this class have committed a grievous wrong, though the wrong to themselves in attempting, at the peril of their health, what is beyond their powers, may be sooner condoned than the wrong which they wilfully do the owners and their associates when they essay a task which they know they cannot, and do not intend to perform.

To prevent the occurrence of this abuse it would be well if every applicant for a berth in a sealing vessel be in future medically examined by a competent physician, preferably the one who is to act as ship's surgeon on the same vessel, before he be allowed to sign for the voyage. Cases of venereal disease should be excluded for obvious reasons. Cardiac derangement, phthisis, rheumatism and severe cases of hernia should decide against him, as well as any imperfection of the sight or hearing. Much trouble may also be saved by making further inquiry as to the condition of the feet, the teeth, and the presence of tumors and ulcers, if they exist, for the physician will otherwise be importuned at the most inconvenient times to pull teeth on shipboard and perform numberless other acts of petty domestic surgery when his time is demanded by more important matters. I may say that the sealers have a positive mania for having their teeth pulled out. Their object is a purely economical one. They recognize the historical fact that all teeth must come out sometime, and it seems well to them to

have as many as possible out when the operation can be done for them for nothing, lest by waiting till the tooth becomes really decayed they should be put to expense.

The form of clothing worn at present by the sealers is admirably adapted to the needs of their employment. The men frequently fall into the sea, however, and are saturated to the skin, on which occasions it is sometimes impossible to return at once to the ship for a change; and they are thus exposed, sometimes for hours, in their wet clothing at a very low temperature. A few, even when they are able to return to the ship, either for lack of a change or from sheer carelessness, remain in their wet clothing until it dries. As a result of such ignorance many cases of rheumatism, pneumonia, pleurisy and bronchitis take their rise. Wetting in the sea is sometimes unavoidable, and may befall the most careful and the most experienced, and when complications arise no possible blame can be attached to the patient; but when wilful negligence has been knowingly added to mischance, the patient is certainly to blame.

Frost-bite, during exceedingly cold weather, is also of occasional occurrence; but as a rule the rigor of the winter has in great degree abated at the time when the fleet reaches the ice, and the thermometer seldom falls below 20. To provide against frost-bite as far as possible, the physician would not be out of his province in personally assuring himself that the men are properly provided with clothing. The main point then is to keep in constant motion, to be plentifully supplied with food, that the energies may be sustained, and to remain within easy distance of the ship in case of emergency. Many of the cases of frost-bite recorded were the direct result of stupidity and carelessness. At the same time, the tragedy of three years ago, when forty-seven men from one ship lost their lives at once through two days' exposure to a severe storm, must be borne in mind. In the instance referred to no blame was attached to anyone concerned. And while commanders of vessels no doubt consider the safety of their men before any possible gain which may accrue at their expense by following a particular course, it is the duty of the men themselves to do their part also, and to remember, however familiar with the life on the ice they may be, that the unforeseen frequently happens.

Ice-blindness, with which large numbers of the sealers are annually afflicted, is less the result of exposure to inclement weather than prolonged visual contact with the dazzling glare of the ice. This is a most painful malady, and for a time renders the patient quite blind. Great pain is experienced at even opening the eyes. Some inflammation is usually present, and the delicate nerves of the organ itself are found to be more or less paralyzed. As a curative measure, soothing antiseptic solutions, mild astringents and complete rest are indicated, and usually assist nature in restoring

the sight after a time. As a preventive, smoked glasses to be worn when on the ice, are recommended. I observed, furthermore, that the caps worn by the sealers have no rim to shade the eye. A deep peak to the cap would greatly mitigate the glaring effect of the ice, as the writer personally discovered in his own case, and might even prevent the development of ice-blindness. Surgical injuries are very numerous, and consist chiefly of fractures and dislocations, gunshot wounds, punctured, incised and lacerated wounds.

If the surgeon's preliminary examination of the men before embarking has been at all thorough he will have no cases of hernia, venereal disease, old standing dislocations, abscess, or ulcer from general debility; and the injuries sustained after going on ship-board by vigorous and healthy individuals will be found to heal with great rapidity.

The punctured wounds are generally received from the sharp steel barbs upon the ice-gaff with which the seals are killed; the incised from the scalping-knives with which the skin is removed from the carcase; the gunshot wounds from the rifles with which they are shot, and the lacerated wounds from the fangs or claws of the seal itself when the animal shows fight.

Fractures and dislocations are the result usually of either falls from the ship, in the ship or upon the ice, or from accident on the ship where machinery is used in stowing the seals, and on the ice where spasmodic muscular efforts are often necessary in leaping from pan to pan. Accidents of this sort are always imminent under any possible conditions, and the absence of any such cases for a couple of voyages is a very frail warrant of security.

Gunshot wounds, grave and even fatal, are likely to occur at any time when the men are shooting the old seals; and especially when the ice is occupied by parties from different ships, engaged in the same vicinity. One or two hair-breadth escapes came under my notice upon the present voyage, but happily nothing more.

The punctured wounds are serious when they enter the capsule of a joint. I had under my charge two such cases, which were very painful, and bade fair to make a slow recovery. The very numerous flesh-wounds which were inflicted healed in a couple of days, nor did I hear of any case of blood-poisoning from this cause, a fact which would indicate a comparative freedom from micro-organisms upon the ice. These wounds are generally the result of carelessness and needless haste when the men are boarding the ship or swarming out upon the ice. Caution in the handling of their gaffs should be constantly impressed.

The incised wounds may also be largely avoided by using a little care when "sculping" the seal. The beginner and the inexperienced should recognize the wisdom of *festina lente*. The slashes thus inflicted heal readily with a few stitches and an antiseptic dressing.

Cases of lacerated wounds are also of common occurrence, for the dog hood (*cystophoro cristata*) is exceedingly ferocious when attacked, and has frequently torn the flesh literally from the bones. Happily many of the wounds inflicted by him call for the offices of the tailor rather than the surgeon. In one case which came under my notice the hand had been transfixed in four places by the fangs of the hood, and looked as if it had been nailed to a board and forcibly torn away. With simple antiseptic treatment such wounds heal in a short time. None of those after-effects ensue which follow the bite of a rabid dog or wolf.

Besides the wounds mentioned, minor abscesses are numerous in the hands or feet, following severe bruises or unnoticed punctures of the skin. Abrasions not properly attended to develop into ulcers. Furunculi and occasional cases of tendinous panaris make their appearance.

The severe strain on one finger, in dragging the skins long distances over the ice with a rope, in many cases produces a stubborn synovitis, or there may be septicemia, or both. Painful and stubborn swellings of the finger, from whatever cause, are termed "sealer's finger" by the men themselves, and when the cause is ascertained should be treated at once. As a result of constant use, the integument is usually thickened and indurated, and it is necessary to lance deep and freely. Antiseptics generally complete a cure. Entire rest for the part and protection from outside contact should be enforced. Poultices are found to be soothing. Successful preventive measures might be taken by relieving the constant strain on one finger. The sealer has several other fingers. A knowledge of the cause on the part of the men themselves is important. Furthermore, a reasonable degree of cleanliness should be suggested, and the means for it provided. Some of the sealers do not wash either hands or face during the entire voyage, and go from day to day with their hands reeking with filth and blood. Erysipelas and diphtheria have already made their appearance, upon the ships, and typhus would probably occur also if the men were not so much in the open air, and if the voyage was not of such short duration. Colds, severe sore throats, bronchitis, tonsillitis, pleurisy and pneumonia are also of frequent occurrence; but the victims will almost invariably be found to be individuals of weakened constitution, who acted unwisely in coming on board at all. The curative treatment will be as anywhere else. The preventive treatment is obvious. There are from twenty to fifty such cases of debility upon every ship, and it is entirely in their own interest that they should be prevented from signing on in the first place, as they do not afterwards earn the remuneration which they receive; which, again, if they did earn, would poorly compensate for a broken constitution inevitably following so severe a strain upon energies never strong or already undermined. One

patient suffering from phthisis had barely strength after the voyage to reach home before he died.

Epidemics of influenza took place on many of the ships during the present year, a dozen at a time being down with it. The treatment indicated is the conventional one, but the means for carrying it out on shipboard are difficult.

Rheumatism is usually the sequel of exposure. There are many such cases, and most of them are also the result of neglect after exposure. Though it may seem inconceivable, many of these men, after being drenched to the skin in the sea, go contentedly, though shivering, to their damp and cold berths in their clammy clothing and wait complacently for a couple of days for their clothes to dry upon them without making any attempt at a change. The same negligence is followed in some cases by renal derangement. I had several cases of this. Warm clothing, a flannel binder, heat to the part if necessary, and saline diuretics afford relief if the patient has sense enough not to repeat his indiscretion.

Indigestion is also of frequent occurrence. If acquired after coming on shipboard it is usually a consequence of the marked change of diet. Many of these poor fellows have been on short commons for a part of the winter, and a sudden accession to the copious and very rich commissariat of the vessels gives rise to digestive disturbance. On the other hand, while the cuisine on the ships is perfectly wholesome, some who have been accustomed to the little refinements of domestic cooking may find the somewhat crude and heavy fare on board disagree with them at first. Often, also, they are forced to carry their food with them all day in a small bag, and eat it cold at irregular intervals while on the ice at a distance from the ship. A very large number suffered also from constipation, which was generally discovered only when some supercurrent affection had made its appearance. Jaundice also made its appearance.

While the accommodation offered the men has no doubt been gradually improving from year to year, and now offers probably a very favorable contrast to the limited conveniences which they enjoyed in the days of the small sailing vessels, and while the owners are willing, and indeed desirous, to make any reasonable innovations for the safety and comfort of the men who are instrumental in bringing annually so great an accession of wealth to the island, the fact still remains that old-established usages, whether on shore or at sea, enjoy always a very strong prestige. What was good enough for, and answered the purposes of the men last year, is very logically regarded as good enough for the men who go next year.

In spite of this fact, more than one needed reform has been made with the most willing co-operation of the ship-owners. One important innovation was in limiting the number of the crews taken

on to the capacity of the ship, which is decided in each case by those most competent to judge. Still other suggestions as to the sanitary needs of the men and the ship will occur to the trained medical man, and these refer particularly to the habits of the men, the defects of the ship, and the medical arrangements. The negligence of the sealers in the simplest questions of hygiene, as indicated by their frequent practice of exposing themselves in wet clothing, has already been referred to. This indifference to the laws of hygiene not only explains much of the disease which makes its appearance on the ship during the cruise, but as they probably are equally careless or imprudent on shore, helps to cast some light upon the alarming increase of tuberculosis in the island during recent years. In most cases of such neglect there is possibly present a subconscious notion of virility in disregarding what seems to them a trivial inconvenience. This widespread ignorance and indifference to sanitary habits cannot be too deeply deplored, and one of the ship surgeon's duties will be to guide and enlighten the men under his care as to the grave significance of such errors.

Though not followed by results as direct or as serious, the general lack of cleanliness among the sealers is not compatible with perfect health. There is no doubt an excellent excuse in his case. He has little leisure for the toilet, and may be called to work almost at any moment. The work itself is exceedingly dirty. The decks are covered with reeking sealskins, to make room for which the supply of coal is being hoisted up from the pounds beneath and thrown overboard or piled in heaps upon the deck. In killing and "sculping" the seals he is literally covered with the blood, the oil, and the contents of the viscera. Not only his hands, but his arms, his clothes, his face, and even his hair is saturated with blood and grease. This foundation catches the black dust of the coal and all the grime and dirt of a ship at sea. To do the work and keep clean at the same time would be really impossible. Add to this the fact that there are no facilities on board for frequent ablutions, and to this fact again, the tradition, which obtains among some of the sealers, that if one washes his thickly-smeared cuticle during the voyage, it lets in the cold and is followed by sickness, and ample excuse will be found for the sealer if he does not attempt to be over-dainty.

Nevertheless, this condition of filth is not wholesome. He fouls the air of his sleeping place, and everything with which he comes in contact. He sleeps in his clothes without change, and they soon become alive with vermin. Often a badly inflamed eye bears witness to the polluting touch of an unclean hand, or a suppurating wound to infection from a similar source. Two or three men complained of erysipelas, which was found to be nothing more than a slight inflammation brought about by the irritation of filth.

One case of plica polonica also developed itself under the same favorable auspices.

A similar lack of cleanliness is also noticed in the matter of food. Each sealer provides his own dishes, and in them receives his rations from the ship. These dishes become so filthy that one almost wonders that anyone would be willing to eat out of them. With grease, blood and dirt on the outside, one not infrequently detects the smell of fermentation within, where, from day to day, slight deposits of food, not easily shaken out, are left to grow sour and decay.

For this also the sealer has the same excuse that he has for the uncleanness of his person; and while it is not to be wondered at that he should fall into these ways, the fact must still be forcibly impressed upon him, and upon the officers over him, that habits of this sort are not only objectionable in themselves, but directly inimical to health also, when in common practice among nearly three hundred men packed together like soldiers in a barrack. It is under such conditions that ship-fever usually occurs.

There are also other practices which should be discountenanced. The men expectorate all about their quarters, vomit freely upon the floor and in their berths, and even micturate in odd corners below to save themselves the inconvenience of climbing to the deck above. Particles of food constantly escape upon the floor and are trodden under foot and decay. To this add the fact that rain and sleet are frequently entering their quarters through the open hatches above them, that the rancid sealskins are stowed beneath them, and one can readily believe that the place is so slippery with filth that it is difficult for the tyro to get about on his feet, and that the air is so impure that the act of breathing seems undesirable.

In the face of these statements, I hasten to say that a more high-minded, trustworthy and manly set of fellows than those same sealers I have seldom had the pleasure to meet before. They are merely the creatures of their environment, and having been driven by necessity to a certain point, have allowed themselves to go further than necessity actually required, and have thus gradually fallen into a degree of uncleanness for which there is ample excuse but no actual necessity.

These considerations lead logically to an examination of the ship's accommodations and equipment. If any improvement is to be made in the condition of the men, it will depend largely upon the facilities which are offered by the ship. The ships of the sealing fleet are barque-rigged, wooden vessels with accessory steam, and are of small tonnage. Each ship carries a crew of nearly three hundred men; and, if the voyage is to pay at all, must return with a cargo of from four to six hundred tons of seal fat. Each ship, moreover, usually starts out with about five hundred tons of coal on board, and sufficient food to supply the crew for six weeks.

which, by the way, is no small matter. Constant readjustment of the cargo, as the input of seals increases, thus becomes necessary, and near the close of the cruise nearly three hundred tons of coal is often, of necessity, thrown into the sea.

In view of these facts it can be readily understood that the ingenuity of the owner might well be taxed even to find standing room for his immense crew on a ship so crowded. He has succeeded in doing a great deal more than this. The forecastle, above and beneath, and the holds, fore and aft, immediately beneath hatches, have been fitted up temporarily with berths. The men are very closely packed together, it is true, but each at least has a berth where he can lie down, and when opened to the men at the beginning of the voyage these quarters are perfectly clean and sweet. The breathing space, per capita, is no doubt too small, but the time during which the men have to put up with this inconvenience is very short, for it is expected that only a small portion of each day will be spent in the berth. In military transports and in emigrant ships there is about the same degree of crowding, as also in the overland colonist cars.

Stoves are provided for heating, and free ventilation is always possible, and indeed is generally insured by the exigencies of loading, for the cargo of seals has to be placed in the lower hold; and for the great part of the time it is necessary to keep the hatches partially open, that the skins may be passed down through the quarters of the men to the pounds in the hold beneath. The skins are no doubt dirty enough—but the pot must not call the kettle black! Could the seals be stored in some other way, the admission of fresh air would be no less imperative. I have no doubt the men find this proceeding an annoyance, but it certainly is not an evil.

The standpoint of the owner must not be overlooked. He assumes all the risks and most liberally shares the profit with the men. Until some new way of catching and bringing home the seals is devised, the owner must carry a large crew in a small ship and reserve as much space as possible for the cargo. He cannot be expected to turn the cruise into a pleasure-trip for the men. Many thousands of dollars are expended in fitting out the ships and in running them. I do not think any more space could reasonably be expected for the accommodation of the men. It would reduce the possible cargo below the paying limit.

The first desideratum is to keep the space they have had allotted to them clean and wholesome, and this they can do by keeping themselves clean. This is certainly difficult, but with the co-operation of the owner will prove, I think, quite possible, and will be best accomplished by reserving the berths for sleeping in, and doing everything else outside.

Good water, as I shall point out presently, is obtainable in any

desired quantity, and as a step towards improved cleanliness on the part of the crew, it might be recommended that greater facilities be given for frequent ablutions. A wash-room could readily be improvised on the deck. Arrangements along a similar line might be made, possibly, by which the men could also get their meals in a more comfortable manner, and have a special receptacle for their dishes and utensils. Latrines also might be provided on the ships. The men are at present forced, when an operation on the bowels becomes necessary, to resort to the ship's side; and a natural disinclination to this difficult acrobatic performance accounts for much of the constipation which I observed among the men. A surprisingly large number also suffered from hemorrhoids, which may in part be explained by the same circumstance.

The food supplied by the ships is admirably adapted for its purpose. The men themselves bring with them in their boxes many minor luxuries, including a great quantity of cake, which it is the domestic custom in the island for their sweethearts to bake and present to them as they are setting out. Even cake may have its romance!

No alcoholic stimulants are provided by the ship, except for the officers, and this prudential rule cannot be too highly praised. The water supply is inexhaustible. The icebergs, which are very numerous, are not formed from salt water, but are simply detached pieces of snow-formed glaciers. The upper ice upon the floating pans is also free from salt, being formed by rain and snow which have fallen subsequent to the first freezing of the ice. The water obtained by melting the ice is almost as pure as distilled water, and excellent for either drinking or cleansing purposes.

In considering the amount of work required of the men, it cannot be said that the sealers are overworked on the whole. The watch is an hour shorter than on other ships. The labor on the vessel itself, while disagreeable, is not heavy, and consists merely in stowing the seals, shifting the coal and other cargo, and duties of the sort. All rights of watch, however, are waived when the ship is among the seals; and then all hands, even the engineers' assistants sometimes, are expected to do their part and keep unremittingly at work for twenty-four hours at a stretch if necessary.

Thirty thousand seals, if well developed, is considered a good catch; though, on the present year the ships reached the ice too soon, and the seals were not as large as they would have been had the fleet cleared on the 14th instead of the 9th of the month. When the ship is among the seals, ten or fifteen thousand can be killed in a day; and when two or three days of such work will load the ship for the return voyage, and earn each individual's remuneration, no reasonable person would take exception to long hours of work for a day or so.

The Medical Department is a new creation. In previous years

no physicians accompanied the ships of the fleet in a professional capacity. Each ship was provided with a venerable medicine chest, fairly well stocked with the preparations of obsolete pharmacopœias. From this secure arcanum it was formerly the office of the enlightened steward to dispense such nostrums as he thought best fitted for each case.

A year or so ago one of the stewards prescribed carbolic acid; and this being taken internally in copious quantities brought about the unexpected demise of the trusting patient. The medical theory upon which the steward was acting is not clearly known, though the most ready explanation is that the steward was either drunk or thought it was something else. Both are bad enough mistakes to be made by a cook, but are unpardonable in a dispenser of medicines. At all events this incident suggested the idea of sending a physician with each ship; and after two or three years of experiment some method will probably be hit upon whereby the five thousand sealers who annually go to the ice may enjoy medical attendance in case of injury or sickness.

The precedent established by the present year, when six physicians accompanied the fleet, may be regarded as tentative. No appalling accidents or epidemic of any moment chanced to take place on the fleet during the cruise; and as this immunity from mishaps cannot very well be placed to the credit of the physician, it might possibly be used as an argument against him, as going to show that his presence was unnecessary. Yet a man does not discontinue his life insurance because he continues to live, nor are firemen dismissed because for a year or so there have been no fires.

The presence of a physician on the ship is simply a precaution against what has already happened more than once, and what may happen again at any moment. What he really gives is his time, and this ranges from six weeks to two months as the case may be. His services are always ready, though there may be a general wish that they may not be required. Mining companies, railways, and manufactories almost invariably appoint a medical man to look after their employees, and compel the latter to pay a small sum out of their wages to meet the expense. Possibly some such method might be adopted, with justice to all concerned, in the case of the sealing fleet and its physicians.

In case of severe sickness or injury there is no place at present on any of the ships where the patient could be treated separately, nor is there any place where cases of infectious disease could be isolated. Should diphtheria, for example, break out on one of the ships, it would spread with great rapidity among the closely-crowded men. It would thus be a very great advantage indeed if on every ship a special apartment were set aside which would accommodate half a dozen, or, at a stretch, ten men. If necessary, infectious cases could be isolated here: in any case it would add vastly to the

comfort of those who are sick. This apartment might be temporary in character, and would be best on deck and not below, with facilities for maintaining an even temperature, perfect ventilation, and absolute cleanliness. Any cases of malingering which this display of sumptuousness might encourage could be readily rejected by the physician.

Besides having an infirmary where he could watch his critical cases, the physician would do well to make an inspection once or twice a day of the quarters of the men. With the co-operation of the commander and officers of the ship, a great deal of improvement could be accomplished in their habits and condition, and the possibility of an epidemic, which their present careless practices would almost seem to court, be entirely removed. This would simply mean the establishment of a department of public health on each ship. The men themselves will not oppose any innovation for their improvement. They simply require to be educated up to a higher standard of nicety, and if sanitary cleanliness is insisted on will do all that their facilities will allow to adapt themselves to a more healthful *regime*.

The ship's medicine chest will in most cases be found to be very deficient. There are usually a number of ointments and liniments and patent medicines, all of very doubtful efficiency and very uncertain age; while the very drugs upon which the physician depends in critical cases are frequently lacking. It would therefore be well for him to examine the chest on his ship before the fleet sails.

Few instruments will be required beyond the usual surgical pocket-case, stethoscope, clinical thermometer, and hypodermic. A tourniquet, a stomach-tube and a set of dental forceps are very likely to be needed. There is no imperative need for urinary analysis. The ice-blindness will be unfamiliar, and an ophthalmoscope might prove of interest, if not of use. A saw, should an amputation be necessary, may be taken, but in cases of frost-bite there will probably be no need for bone forceps until the ship has returned to port.

There will be no epidemics on board if the physician is thorough in his examination. Neither will there be any women, and an obstetrical or gynecological outfit may be dispensed with. I was told of a physician who, some time ago, besides bringing the above, also took a Roentgen ray apparatus and a sphygmograph, and was thus prepared for any prodigy of nature that might have taken place. But as I have shown, the physician need not look forward to miracles on the sealing fleet, and the usual run of casualties will pretty closely occupy all his attention.

THE GENERAL MANAGEMENT AND CONSTITUTIONAL
TREATMENT OF TUBERCULOSIS OF BONES AND
JOINTS—SPECIAL REFERENCE TO THE
USE OF TENTS.*

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IN the treatment of tuberculous disease of bones and joints, all surgeons recognize the value of functional rest, and in all standard text-books on surgery the various means of securing this by fixation, traction, local protection, etc., are more or less fully discussed; presumably careful and competent surgeons are also not neglectful of the general management and constitutional treatment of this class of cases. A somewhat careful examination of the literature of the subject, however, has caused the writer to feel that most authors make too little effort to impress upon their readers the fact that suitable environment and those general measures which are known to be of such great value in phthisis are also urgently called for when tuberculosis has attacked the bones or joints. The fourteen volumes of the Transactions of the American Orthopedic Association thus far published are replete with papers on almost every possible phase of tuberculous bone and joint disease, yet not a single paper devoted entirely to a consideration of the general management and constitutional treatment has appeared heretofore. In Vol. V, there is a paper by Dr. J. D. Griffith on the use of guaiacol as a constitutional remedy; in Vol. XI, the favorable effect of the climate of Colorado is dealt with by Dr. Geo. B. Packard; there are scattered incidental references to the value of fresh air, sunlight, etc.; but in most of the papers and discussions the general management and constitutional treatment either are not mentioned or receive but a passing notice of at most a few lines. Several excellent books on Orthopedic Surgery have emanated from members of this Association, but in none of these, in the writer's opinion, do the chapters on tuberculous bone and joint disease deal in a sufficiently emphatic and detailed manner with the general care of the patient. In the latest edition of Bradford & Lovett's "Orthopedic Surgery" (1899) over one-third of the book is devoted to a consideration of tuberculous disease of bones and joints, but beyond a couple of sentences on page 44 and a

*Read at the annual meeting of the American Orthopedic Association, at Philadelphia, June 5th, 1902.

single sentence on page 295, no reference is made to general management and constitutional treatment. Again, in Whitman's "Orthopedic Surgery" (1901) a similar proportion of the book is occupied by a discussion of the manifestations of tuberculosis that are of interest to the orthopedic surgeon, and although there are two pointed sentences on the importance of constitutional measures, one on page 58 and another on page 101, as well as incidental references in several other places, it seems to the writer that the matter receives much less attention to detail than its importance demands. In fact, of nearly all books on Orthopedic Surgery, as well as most standard works on general surgery, the criticism is not unfair, that so much attention is given to the details of local, mechanical, and operative treatment, while so much is taken for granted in regard to general management, that the reader can hardly fail to receive the impression that the latter is relatively unimportant. Of the volumes which the writer has examined, the one which appears to present most adequately the importance of looking after the patient as well as his joint is that by Nicholas Senn (*Tuberculosis of Bones and Joints*, 1892).

The neglect of most authors to lay greater emphasis upon the general management of patients with bone and joint tuberculosis is, it seems to me, largely responsible for the opinion held by so many general practitioners that the treatment of a case of chronic joint disease is practically summed up in the application of a suitable splint or brace. Every orthopedic specialist whose practice is largely of the referred and consultation variety, needs only to look over his correspondence files and recall his consultations with general practitioners to be convinced that the one prominent question asked by the practitioner who is seeking counsel in the management of a chronic joint case is, "What kind of a splint should be used?" as if the application of some appliance constituted the Alpha and the Omega of treatment in such cases. The reason why this subject has not received more liberal attention in surgical literature is perhaps not difficult to discover. It is only a comparatively short time since the immense usefulness of mechanical apparatus in the treatment of chronic joint disease has come to be universally recognized, and our observation of the enormous superiority of the results achieved by mechanical methods over the measures formerly employed has caused us to direct all our energies to the perfecting of means for securing thorough rest and protection, with the result that the mechanical problems in connection with the joint have absorbed too large a share of our attention, and we have forgotten at times that the joint is but part of a patient. Moreover, it is but a short time since we began to realize that fresh air, sunshine, and proper food and clothing are more important than all other measures combined in the prevention and cure of pulmonary tuberculosis; while judging by

our writings, and possibly to a considerable extent by our practice also, we are still largely unconscious of the fact that proper environment and the measures for general invigoration and increase of resisting power which experience has shown to be so useful when tuberculosis has attacked the lungs, are also urgently called for if we expect the best obtainable results when this disease is located in other tissues. I do not for a moment presume that the members of this Association are doubtful of the benefit to be derived from good general management and constitutional treatment in tuberculous joint cases, but I question whether our theoretical views are always consistently embodied in our practice, and this paper is presented for discussion in the hope of arousing renewed attention to the subject, together with a desire to do something toward filling in what appears to me an undesirable gap in our recorded Transactions, rather than with the expectation of offering anything very new.

In the general treatment of bone and joint tuberculosis drugs occupy a small and relatively unimportant place. Tonics, such as iron and arsenic, in small doses, are sometimes of service, but most cases are as well without them if proper hygienic conditions can be secured. Cod liver oil, during the winter months, if it be well digested, is often distinctly beneficial, especially to children, but good sweet cream is perhaps even more useful. Milk, cream, and butter of the best quality should enter largely into the dietary, along with such staples as oatmeal porridge, whole wheat bread and beef. In general, the diet should be simple and nutritious, and it is especially necessary to intelligently adapt the patient's food supply to his digestive power and eliminative capacity. The wisdom of blindly encouraging every tubercular patient to swallow large quantities of highly nutritious foods without carefully considering his ability to assimilate them may well be doubted. Every agency should be employed which will fortify the patient's constitution, augment his general vigor and increase the resisting power of his tissues, and it may be claimed that of all the various means to these important ends at our command the most valuable are fresh air and sunshine. The more nearly the patient can be brought to a continuous out-door life, with the inconveniences of such a mode of living eliminated, the better. The best means of securing this will depend upon circumstances. The ideal method is to place the patient in practically the same kind of environment as is found in the best sanatoria for pulmonary tuberculosis. In fact, sanatorium methods are almost as indispensable to the best results in bone and joint tuberculosis as in phthisis. Saying this is equivalent to claiming that the vast majority of poor patients cannot properly be treated in their own homes, and that even in the homes of the well-to-day special arrangements are necessary, and such is the

case. The poor should be treated, at least for a time, in hospitals, not in ordinary hospital wards, but in hospitals with special provision for the requirements of tuberculous patients in regard to sunshine and fresh air. I know of few more discouraging problems than the attempt to treat successfully and guard against relapse, the immense number of tubercular joint cases seen in the orthopedic clinics of the hospitals in large cities. The depression of vital powers which results from insufficient and unsuitable food, is accentuated by breathing the vitiated atmosphere of small, close, dirty rooms, and is multiplied almost indefinitely by the general ignorance, wretchedness, poverty, vice, and bad heredity of the submerged classes in our large centres of population. The only hope of giving such patients a fair chance in the conflict with such a foe as tuberculosis consists in securing for them, for a time at least, proper hygienic surroundings, and this for the purpose of enlightening them as to their own requirements not less than for the immediate beneficial effect of the improved environment. The writer is not blind to the practical difficulties in the way of providing suitable hospital accommodation during lengthened periods for the multitude of patients with chronic tubercular joint affections; nevertheless, it is the duty of the medical profession to arouse attention to the existing need, and to point out that civilization and philanthropy have thus far failed adequately to provide for it. The requirements will not have been met until the poor who suffer from these affections can command the advantages of sanatorium methods, at least during the acute stage of the disease and in the winter season. In the convalescent period and during summer they can be treated fairly well as out-patients, for a great many cases, even among the poor, do reasonably well in the warm season when for their own comfort they are compelled to open up their houses, live out of doors to some extent, and get all the fresh air possible. My observations have convinced me, however, that relapse and aggravation of Pott's disease, hip-joint disease and other chronic tubercular joint troubles are especially apt to occur during the latter part of the winter, the reason being that the patient's general health and resisting power have been greatly reduced by months of residence in close, ill-ventilated rooms. In the case of the very poor the only sure way of preventing this deterioration of general health and its resulting unfavorable influence upon the joint affection is to provide for them a suitable environment during the inclement season.

The plan of treating pulmonary tuberculosis in tents is one which has gained greatly in favor during the past few years, as it has proved a simple, practical, inexpensive, and efficient method of enabling patients to live all the time practically in the open air. The ventilation in a tent may be made nearly perfect; for although special, controllable, ventilating openings should be arranged, one

has but to examine a piece of canvas under a microscope to be convinced that an immense volume of air must diffuse itself through the natural open windows of this fabric, especially during cold weather, when the tent is heated and a difference in temperature between the inside and outside air thus created. That such rapid diffusion actually takes place is proved by the freedom from foulness of the atmosphere in the tent even when patients are crowded together in a way that could not safely be permitted in an ordinary hospital ward, and by the relatively large amount of fuel required to heat the tents. This fact, that the colder the weather the better is the ventilation, makes the tent especially valuable during winter when the patients are more inclined to shut themselves up. During summer, of course, the sides of the tent are raised and the patients are then practically in the open.

Over a year ago some experiments in treating in tents patients suffering from tubercular bone and joint disease were begun in the Toronto Orthopedic Hospital. In fourteen months (March 15th, 1901, to May 15th, 1902) there were admitted to the tents the following cases: Pott's disease, 25; hip-joint disease, 13; white swelling of knee, 6; white swelling of ankle, 4; white swelling of elbow, 1; in all 49 different cases. The shortest period spent in the tent by any patient was one day, the longest 343 days.

The entire number treated has been too small, and the period over which the observations extended too short to permit of any exact scientific deductions; moreover, the method of keeping records has hardly been sufficiently uniform and exact to make any compilation of statistics possible. Consequently the writer's object is simply to record a few general observations. In a general way, then, it may be stated that from observing these cases and contrasting their behaviour after they entered the tents with their previous progress under ordinary conditions, the conclusion arrived at has been emphatically and even enthusiastically favorable to tent life. The response to the change is usually immediate and pronounced. In most cases a distinct improvement in appetite is observed within twenty-four hours; both nurses and kitchen staff report that relatively a larger proportion of food is consumed, and it is eaten with greater relish by the tent patients than by those in other wards. I have repeatedly been struck by a distinctly favorable change in the color and expression of the face within one or two days after admission to the tents, the dull, listless, sickly, anemic appearance having within that brief time undergone a change which could not fail to attract attention. The patients almost immediately begin to put on flesh, while mental depression vanishes, and a buoyant, happy, hopeful feeling takes its place. The general impression left upon the surgeon's mind as he observes the patients day after day is that they are doing well, that their general health is being rapidly improved, their

physical capital augmented and their resisting power reinforced. Improvement in the local conditions is usually quite as satisfactory, but is slower in manifesting itself, and appears to be consequential upon the improved general condition. The conclusion is irresistible that most of the patients have made much more rapid strides toward recovery than would have been possible under ordinary conditions. It is interesting to note that the friends of patients under treatment in the tents are usually greatly delighted with the improvement they observe, and in some instances parents are very anxious to secure the readmission of children whom they had removed. Another fact worthy of being referred to is that the general health of the nurses who are on duty in the tents undergoes a distinctly favorable change. They report increase of appetite, and that they feel stronger and more vigorous; and it is quite certain that their gain in flesh and improvement in color could hardly fail to attract the attention of even a careless observer. So conscious are the nurses of the difference that they invariably regret when their turn comes to return to duty in the regular wards.

While out-door life is of great assistance in the treatment of all tubercular bone and joint affections, it is particularly useful in that class of patients whose recuperative power appears to have been exhausted, and who are being slowly worn out by discharging sinuses which other means of treatment have failed to heal. We are all only too familiar with these unpleasant cases, in behalf of which we have put forth our best efforts, but in which surgical and mechanical methods alike have failed or been but partially successful, and in which the tubercular process creeps on from one portion of tissue to another, or has become so deep-seated in the pelvis or spine that it is practically beyond reach of direct treatment. In some such cases our only resource lies in efforts to improve the general resisting power of the patient; if this can be done he has a chance of escaping from the malady which holds him so relentlessly. It is not an exaggeration to claim that the lives of some such patients may be saved through the agency of fresh air and sunshine after all other means have failed. It is not claimed that tents offer the best solution of the problem of securing the nearest approach to a continuous out-door life, but that properly designed tents suitably located are much better than the average hospital ward, and that they are an efficient and inexpensive supplement to the regular wards. The kind of buildings and much of the routine of life adopted in modern sanatoria for pulmonary tuberculosis are probably just as useful and efficient as tent life, and are certainly more convenient, and such buildings and a similar routine should be employed by all hospitals which aim at affording everything necessary for the best care of patients with surgical tuberculosis. In the case of private pa-

tients, various expedients may be resorted to to secure the benefit of sunshine and fresh air, when for any reason residence in a sanatorium is impracticable or undesirable. Many patients who have a lawn in connection with their homes can be induced to fit up a private tent and occupy it even during the winter months. Others who have a verandah with a southern exposure can be taught to make good use of it, and soon learn to enjoy spending much of the time in the open air even in cold weather, their body clothing and bed covering being, of course, adapted to the season. Even in ordinary private houses the ventilating arrangements of living and sleeping rooms often can be enormously improved by the exercise of a little ingenuity, and the surgeon should give these arrangements personal supervision.

No reference thus far has been made in this paper to the necessity of using such special orthopedic treatment as each case may call for. It is admitted by all that a certain proportion of tubercular bone and joint cases will ultimately terminate favorably as far as arrest of the morbid local process is concerned, under purely expectant measures. We all know, however, that this spontaneous recovery is usually accompanied by unnecessary and often pitiable deformity, and we are quite as certain that not only can deformity be largely prevented, but that the disease can be brought to a termination in a shorter time, with less destruction of tissue, and at the expense of far less suffering, by the intelligent use of surgical and mechanical means. It is important not to misunderstand the true relation of constitutional measures to surgical and mechanical treatment. The mistake is often made of supposing that a patient is necessarily deprived of the benefit of exercise and fresh air while confined to bed. Many orthopedic cases are best managed throughout the acute stage in the recumbent position, fixation dressings, extension, etc., being used according to indications; but it is most important to see that this period of enforced inactivity is passed in a suitable environment, and that the lack of active exercise is compensated for as largely as possible by systematic, efficient massage. On the other hand, it is necessary to guard carefully against the error of looking upon fresh air and sunshine as substitutes for surgical and mechanical means. Their true office is complementary, not vicarious. Our efforts to perfect mechanical and local methods of treatment must not be relaxed, but we should strive more earnestly to secure such fortification of the patient against relapse or other manifestations of vulnerability as are afforded by hygienic living and improved environment.

When we recall the deplorably large number of relapses after apparent cure, and the great proportion of our cured patients who afterwards die of some other form of tuberculosis, it becomes a practical and serious question whether we are not largely respon-

sible for these unfortunate sequels by our failure to make greater efforts to regulate permanently the habits and environment of our patients.

In conclusion, let me say that when an individual with tubercular disease of hip, spine, knee, ankle, etc., presents himself for advice, *the surgeon's first duty is to realize that he is being consulted by a patient who has tuberculosis*; and just in proportion to the clearness with which this idea is defined in his own mind will the surgeon be able to take a comprehensive grasp of the present and future needs of his patient. Painstaking efforts to teach the patient, or in the case of a child, those responsible for him, as much as they are capable of understanding about the nature of this disease will be well rewarded. The patient's hearty co-operation, which is so indispensable, is likely to be secured only in proportion as the surgeon succeeds in making him grasp what tuberculosis means and what its existence in his system implies.

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ECTOPIC GESTATION WITH REPORT OF A CASE.*

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ONE pregnancy in every thousand cases is in the ectopic position. The mortality of extra-uterine gestation when uninterfered with is 68.570, according to Schauta. With this estimate before us, the extra-uterine fetation must always be considered a subject of great importance, both from its clinical and pathological interest—interesting because of the varied character of the symptoms and the quiescence of condition, which so suddenly and on such slight provocation prove alarming, or even fatal.

Few pathological conditions, when submitted to operation, prove so successful in results, or bring such credit to the surgeon's knife; and few conditions, when unrecognized, prove more disastrous. The interest is shared in turn by the physician, the surgeon, and the pathologist.

As a rule the problem is first presented to the family physician, who usually invites the surgeon to assist in the solution or confirm his diagnosis, and finally the abnormality becomes the study of the pathologist.

So true is the statement that the diagnosis and fate of the ectopic pregnancies rests with the general practitioner, that Lawson Tait, with the largest recorded experience of seventy-five cases, *post mortem* and *ante mortem*, never had an opportunity of making an early diagnosis. Dr. Winckel, of Munich, with his large constituency, only had thirteen cases. If it is incumbent upon the pathologist to find the cause for this condition, and the surgeon to treat it, the graver responsibility rests with the practitioner to guard the life of his patient by an early diagnosis.

Having advanced these claims for a subject of such special interest to the different departments of medicine, I need make no apology for presenting the history of a recent case.

Patient, Mrs. M., aged 25, married last August; miscarried in November. On February 15th, the date of the regular monthly period, the patient was seized with pain in small of back, accompanied by aching of legs and pronounced weakness and excessive flow.

These were simply exaggerated conditions of the usual monthly phenomena. The following day the patient was up for about two hours, when the aching increased suddenly to a spasmodic pain felt in the left iliac region. A physician was summoned and attended for a week, till symptoms were relieved. On the 21st, the sixth

* Read at the regular meeting of the Toronto Medical Society, May 1st, 1902.

day after the onset, the patient was up and continued to go about till March 10th. Two unusual features marked the intermenstrual period: (1) Sharp and intermittent pains, sometimes diffuse, but usually localized in the left ovarian area. (2) A vaginal discharge, which varied from a mere trace to a free flow of blood. Nor were these features independent of one another, as the flow was in proportion to the pain, the pain being invariably followed by an increase in flow of blood.

March the 10th and five following days there was a marked increase in pain and quantity of flow. These were more regular in character, and no doubt corresponded to a menstrual period.

On the 11th I saw the patient for the first time. There were few constitutional symptoms to excite alarm, the pulse being 72 and temperature 98 2-5. There was, however, diffuse pain over the abdomen, with special tenderness on the left side and some rigidity of recti. The face was, however, drawn, and wore an expression of anxiety. The pain subsided under treatment, but returned in three days, with no apparent cause. On vaginal examination on the 15th the os was found to be extremely sensitive. There seemed to be thickening of the tube and broad ligament, an opinion based, of course, somewhat on actual observation, but also on inference, as the pain and the rectus of the left side denied me a lax wall for free palpation. I advised the patient to go to the hospital, as she would be in a more suitable place to await results.

On the 18th of March the patient entered Grace hospital, and as she did not improve the next two days, a consultation was decided upon. On account of the tenderness, the patient was prepared for examination under an anesthetic. The abdomen was prepared for celiotomy should the conditions found indicate it. Dr. Emory and Dr. Barrick, as consultants, and myself, examined bimanually, and had no difficulty in locating a tumor of the left ovarian region. The tumor was round and hard, and seemed to be about an inch and a half in diameter. A sulcus was felt between the uterus and tumor. Surgical intervention was considered advisable, and Dr. Emory decided to operate without delay. The usual median incision in the linea alba was made. On coming to the peritoneum the yellowish and jaundiced tint presented by the serous membrane covering blood was seen. Active hemorrhage was already present, and was very profuse, covering the intestines and omentum everywhere. To arrest hemorrhage at once, the left pedicle was felt for and clamped. The tube was then brought into view, and a large opening at its extremity enclosing a tumor was revealed. The proximal part of the tube was about normal in size, but the distal portion, including the isthmus, the ampulla and the fimbria, were greatly thickened. Salpingo-oophorectomy was performed, the tube being removed beyond the healthy appearing portion. The blood was removed as far as possible, and the ab-

domen closed without drainage. The peritoneum, fascia and skin were closed separately by continuous catgut sutures. As there had been considerable loss of blood, and the pulse had lost its tone, I ordered a hypodermic of strychnia, 1-20 grain, and a quart of normal saline, which were given before the patient left the operating room.

The subsequent condition caused no anxiety, the recovery being uneventful. The patient sat up on the tenth day, and went home on the thirteenth day after operation.

On a more careful examination of tube it was found to be slightly increased in diameter and thickness in its proximal uterine portion. Towards the area spoken of as the isthmus it began rapidly to enlarge and thicken, becoming cone-shaped in appearance. The inflammatory action here was most pronounced, the wall being fully a quarter of an inch thick. The tentacle-like appearance of the fimbriated extremity was wanting; no trace of the fimbriae could be found. The margin of the opening at the extremity was thick and rounded like the rim of an egg-cup. Enclosed in this cup-like enlargement was what at first was considered to be the fetus. On examination it was found to be an organized blood-clot. This blocked the lumen of the tube, but increased in size with the deposit on its surface of the blood from each fresh hemorrhage. The clot was prevented from escaping or being forced into the abdominal cavity by adherent bands of fibrin. The sac appeared to rest between the ovary and the extremity of the tube, supported by the tubo-ovarian ligament and the broad ligament. Traces of the villi of the chorion were found on the tube, ovary, and ligaments.

The broken amniotic membrane was found attached here and there, and its inner smooth surface was easily recognized. No trace of the fetus was found. It was thought that the sac was present in the large tumor, afterwards found to be a clot. Not till the abdomen had been closed was it discovered that the fetus had not been removed with the tube. The action of the clamp when placed on the pedicle may have separated the attachments. Under favorable circumstances the fetus may escape detection, and Howard Kelly has pointed out that it may be lost sight of altogether, and at other times found only after the most thorough search. It is then recognized by the presence of a dark spot representing the pigment in retina of eye.

The presence in the abdomen of a six-weeks' fetation would be readily absorbed, and have no injurious results. The symptoms of an extra-uterine gestation necessarily varies with the age of the pregnancy. The symptoms characteristic of a six-weeks' fetus may be latent in one case, and only those peculiar to later development appear. Extra-uterine pregnancies have gone to full term without arousing the suspicion of either physician or patient, while

other cases have had marked disturbance from the commencement. The symptoms may be those of an ordinary pregnancy, as vomiting, enlargement of breasts with secretion of milk, pigmentation of mammary areola, development of Montgomery's follicles, absence of menstruation. The vomiting in ectopic cases is usually severe, and is considered to be a diagnostic point. Dr. Emmet relates a case in which it was entirely absent; there was no vomiting in my case, and only slight morning nausea. Constipation is usually marked. Sometimes there may be no symptoms till rupture, and then the conditions may be so fulminating in character as to cause death in a few hours. Howard Kelly relates the instance of a case in which an actress died in Paris with the suspicion of death from an irritant poison. The autopsy revealed a ruptured ectopic pregnancy.

Dr. Frederick Gray, in the *London Lancet* of 1879, records a case of a patient who had dinner at seven o'clock, was seized in an hour with violent vomiting and excessive purging, and suffered such collapse that she died in three hours before medical aid arrived. The death was credited to poison, till a *post-mortem* showed two quarts of blood from a ruptured tube.

The diagnosis is based on: (1) Cessation of menstruation; (2) other signs of pregnancy, such as nausea, changes in the breasts, etc.; (3) sudden severe pain, often coming on after exertion; (4) recurrence of irregular, more or less profuse menstruation. In my case there was a history of morning sickness, this being the only symptom of pregnancy.

The two suggestive conditions were pain, which might be found in several other conditions, and the continuous discharge from vagina of blood. Routh has laid it down as a general rule, and one absolutely reliable, that hemorrhage from uterus is merely the external manifestation of a similar internal condition caused by hyperemia, the exciting cause in this case being the presence of a growing ovum.

Baldy, in speaking of diagnosis, says the uncertainty is so great that there can be no certainty. Kelly, on the other hand, says it is one of the easiest of conditions to distinguish. Sometimes symptoms seem to justify a diagnosis of extra-uterine pregnancy, as painful and swollen breasts containing milk, morning nausea, frequent micturition, constipation, a missed period or two, and passage of blood and shreds from vagina. Dr. Price, with Dr. Baldy, diagnosed undoubted extra-uterine pregnancy in this case, but the operation disclosed an ovarian cyst.

In a second case the classic symptoms were present, and examined by the foremost gynecologists of the United States. Dr. Penrose found a pyosalpinx. Dr. Gaillard Thomas, who ranks second to Dr. Lawson Tait in experience with ectopics, but having had greater opportunities for diagnosis, says: "There are few

pelvic conditions which develop in the female from phantom tumor to facial impaction, which I have not seen confounded with ectopic pregnancy.

Cause.—Ectopic gestation has been defined as an arrest and development of the fertilized ovum somewhere between the graafian follicle and the uterus. The causes may be classified under three heads, according to Howard Kelly. (1) Obstacles within the lumen of the tube by which the calibre is diminished. (2) Diseases of the tubal wall, and peculiarities in its anatomy or form. (3) Factors acting externally to the tube, by which its lumen is encroached upon and obliterated. The particular cause in the large number of cases was held to be a catarrhal and purulent salpingitis (Tait and Orthman). It was thought that the cilia of the uterus bore the spermatozoa towards the fundus, and that the cilia of the tube bore the ovum to the uterine cavity, and that fertilization here took place. It is now demonstrated that the action of the cilia in case of tube and uterus is towards the outlet. Those who held to salpingitis theory contended that the spermatozoa ascended the tube and came in contact with the ovum, which had not been carried down the tube owing to the destruction of the ciliated epithelium.

Recent observations have shown that a salpingitis of a purulent character has not destroyed the cilia or interfered with their function. This would leave only one cause to account for arrest of ovum, namely, the decrease in size of the lumen, owing to the swollen and congested condition of tube by inflammatory products. The conclusion is that extra-uterine pregnancy is simply due to some interference with the normal downward passage of the fertilized ovum. An harmonious opinion has not been arrived at in regard to the pathology of the ectopic condition. In a recent review by the *British Medical Journal* of contributions on this subject by Couvelaire, of France, and Dr. Petersen, of Sweden, is set forth the wide difference of opinion. Couvelaire believes that a previous inflammatory condition of the tube is not the cause of the arrest of fertilized ovum. Petersen, on the contrary, claims that there is a history in nearly every case of salpingitis, either chronic or recent.

In making a histological examination of the tube, I find that there is not the slightest evidence of injury to the mucous lining of the tube, nor is there any appearance of inflammatory reaction or loss of ciliated epithelium. There is proof of a chronic inflammatory change which has commenced in the peritoneum and extended inwards. The reaction has not passed the sub-mucous layer. The ovary was small and shrunken, and under the microscope showed the presence of a corpus luteum, which might correspond to an eight-weeks' pregnancy. This fibrous mass was espe-

cially well shown by Van-Giesen's stain, which makes the fibrous tissue conspicuous by its deep, red staining.

These data are in keeping with the clinical symptoms, which gave a history of salpingitis and endometritis some three years ago. In support of the salpingitis theory it must be remembered that the presence of ciliated epithelium here and there does not establish proof of the integrity of motile function of the epithelium, as a failure at one point of the epithelium to carry onwards the ovum would lead to its arrest. The period of proportionately greater growth is in the second month, from the fourth to the eighth weeks, while the period of most frequent rupture follows this, being from the sixth to tenth week. The excessive hemorrhage is accounted for by the fact that rupture most frequently takes place on the margin of the placenta and attached tissue.

Treatment.—There seems to be only one answer to the question of treatment, and that is operation. In cases left without operation, all the children and 76 per cent. of mothers die. Howard Kelly says that with early operation not more than 6.8 per cent. should be the mortality, which is 70 per cent. less than Martin's estimate without operation. A prominent authority has said that every case of early ectopic pregnancy should be treated as a malignant tumor. Two reasons for this method of treatment are conspicuous: (1) Primary rupture in 99 per cent. of all cases, even in those which go to term, is into the peritoneal cavity, and not into the cavity of the broad ligament. (2) Extravasations from ruptured tubal sac are attended by shock out of all proportion to blood lost. In retrospect I may add that experience proved the wisdom of having the operation follow immediately the examination under an anesthetic.

I recall a case almost identical in history with the one related. The operation, it was decided, should follow examination in a few days. The development of alarming symptoms subsequent to examination make an early operation imperative. The abdomen was occupied with a generous supply of clotted blood, from which condition the patient died eighteen hours after operation. The protection afforded the hyperemic tissue by a rigid abdominal wall is removed under anesthesia, and rupture of tube is easily induced.

Selected Articles.

THE CANADA MEDICAL ACT, 1902.

As it will doubtless be of interest to all of our readers to know just what the Roddick Bill, as recently passed by the House of Commons, Ottawa, enacts, we append it herewith:

AN ACT TO PROVIDE FOR THE ESTABLISHMENT OF A MEDICAL COUNCIL IN CANADA.

His Majesty, by and with the advice and consent of the Senate of the House of Commons of Canada, enacts as follows:

1. This Act may be cited as *The Canada Medical Act, 1902*.

2. In this Act, unless the context otherwise requires:

(a.) The expression "medicine" shall be held to include surgery and obstetrics, and to exclude veterinary surgery, and the expression "medical" shall be held to include "surgical" and "obstetrical."

(b.) The expression "Provincial medical council" includes "Provincial medical board" and "College of Physicians and Surgeons."

(c.) The expression "medical school" includes any institution wherein medicine is taught.

(d.) The expression "students" means only persons admitted to the study of medicine in virtue of Provincial laws.

3. The persons from time to time appointed or elected, or otherwise being, under the provisions of this Act, members of the Medical Council of Canada, are hereby constituted a corporation under the name of "The Medical Council of Canada," hereinafter called "the Council."

4. The purposes of the Council shall be to promote and effect—

(a.) The establishment of a qualification in medicine, such that the holders thereof shall be acceptable and empowered to practice in all the Provinces of Canada;

(b.) The establishment of a register for Canada of medical practitioners and the publication and revision from time to time of such register;

(c.) The determination and fixing of the qualifications and conditions necessary for registration, including the courses of

study to be pursued by students, the examinations to be undergone, and generally the requisites for registration;

(*d.*) The establishment and maintenance of a board of examiners for examination and for the granting of certificates of qualification;

(*e.*) The establishment of such a status of the medical profession in Canada as shall ensure recognition thereof in the United Kingdom, and enable Canadian practitioners to acquire the right to registration under the acts of the Imperial Parliament known as the "Medical Acts;"

(*f.*) The enactment, with the consent and at the instance of the medical councils of the various Provinces of Canada, of such Provincial legislation as is necessary to supplement the provisions of this Act and to effect the foregoing purposes.

5. The Council may acquire and hold such real estate and personal property as is necessary or expedient for the purposes of the Council or of providing a revenue therefor, and may sell, lease, or otherwise dispose thereof; but the annual value of the real estate owned by the Council and held for the purposes of revenue only shall not at any time exceed the sum of twenty-five thousand dollars.

6. The Council shall be composed of—

(*a.*) One member from each Province, who shall be appointed by the Governor in Council;

(*b.*) Members representing each Province, their number being fixed in each case according to the number of practitioners registered under the law of the Province, in the following proportions:

For the first 100, or fraction thereof	One.
For the second 100, or fraction thereof over one-half .	One.
After the first 200, for each succeeding 600, or fraction thereof over one-half	One.

The elected members representing each province shall be elected—one by the Provincial medical council, and the others by the duly registered medical practitioners having received a license or certificate of registration within the province under regulations to be made in that behalf by the Provincial medical council; provided that it shall not be competent to any Provincial medical council, or the regular practitioners of any province, to elect any person as a member of the council who is in anywise connected with the teaching staff or governing board of any university or incorporated medical school which is under the provisions of this Act entitled to elect a member of the council, nor shall it be competent to them to so select any person belonging to any such particular and distinct school of practice of medicine as is mentioned and intended by paragraph (*d.*) of this subsection;

(*c.*) One member from each university or from any incorpor-

ated medical college or school in Canada having an arrangement with a university for the conferring of degrees on its graduates, engaged in the active teaching of medicine, who shall be elected by the university or by such college or school under such regulations as may appertain;

(d.) Three members, who shall be elected by such practitioners in Canada as, by the law of the Province wherein they practice, are now recognized as forming a particular and distinct school of practice of medicine, and, as such, are by the said law entitled to practice in the province.

2. No one shall be a member of the Council unless he—

(a.) Resides in the Province for which he is an appointed or elected member;

(b.) Is a duly registered member of the medical profession according to the law of the Province which he represents;

(c.) Is duly registered as a medical practitioner in the register established under the provisions of this Act; but this qualification shall not be required of any of the members originally composing the Council.

3. No Province shall be represented upon the Council either by appointed or elected members until the Legislature of the Province has enacted in effect that registration by the Council shall be accepted as equivalent to registration for the like purpose under the laws of the Province; and when all the Provinces of Canada have legislated in effect as aforesaid, it shall be lawful to appoint and elect in the manner aforesaid the members of the Council;

Provided, however, that if any of said legislatures afterwards repeals its legislation contemplated by this section, no more persons shall be given the right to practice medicine within the jurisdiction of such legislature, by reason of their qualification or registration under this Act.

7. The term of office for appointed members shall be four years.

2. Members elected by Provincial medical councils shall remain in office during the term of the members of the medical council of the Province for which they are elected.

3. All other members shall be elected for four years.

4. Any member may at any time tender his resignation by written notice thereof to the president or to the secretary of the Council. Upon the acceptance of such resignation by the Council, the Council shall forthwith give notice in writing thereof, in case of an appointed member, to the Secretary of State of Canada, and, in case of an elected member, to the secretary of the medical council for the Province, or to any university, incorporated medical school or college, or to the president or the secretary of any recognized distinct school of practice of medicine represented, which such member represents.

5. Any person who is or has been a member may, if properly qualified, be re-appointed or re-elected; but no person shall at one time serve as a member in more than one capacity.

6. In the case of members of the Council whose term of office is about to expire, successors may be appointed or elected at any time within three months before the expiration of such term; provided that where any vacancy exists in the membership of the Council by reason of any term of office having expired, or otherwise, such vacancy may be filled at any time.

7. If there has been a failure to elect a member of the Council, or to elect a properly qualified member, or to cause the name of the member elected to be certified to the secretary of the Council within a reasonable time after such election might have been made, then, after notice from the Council, requiring the Provincial medical council, or the incorporated medical school or college or university, or the recognized distinct school of practice of medicine, to cause such election to be made and to certify the result thereof to the Council within one month from the date of service of such notice, the Council may, in case the default continues, itself elect such member.

8. A member appointed or elected to fill a vacancy caused by death or resignation shall hold office in all respects as the person in whose place he is appointed or elected would have held office, and for the remainder of the term for which that person was appointed or elected.

9. All members appointed or elected shall continue in office until their successors are appointed or elected, or until the expiration of their term of office, if their successors are appointed before the expiration of such term of office.

8. The Council may from time to time—

(a.) Elect from among its members a president, a vice-president, and an executive committee;

(b.) Appoint a registrar, who may also, if deemed expedient, act as secretary and treasurer;

(c.) Appoint or engage such other officers and employees as the Council deems necessary to carry out the objects and provisions of this Act;

(d.) Require and take from the registrar, or from any other officer or employee, such security for the due performance of his duty as the Council deems necessary;

(e.) Fix the allowances or remuneration to be paid to the president, vice-president, members, officers, and employees of the Council.

9. The Council shall hold its first meeting at the city of Ottawa, at such time and place as is appointed by the Minister of Agriculture; and, thereafter, an annual meeting of the Council

shall be held at such a time and place as is from time to time appointed by the Council.

2. Until otherwise provided by regulation of the Council, twenty-one members of the Council shall form a quorum, and all acts of the Council shall be decided by a majority of the members present.

10. The Council may make regulations not contrary to law or to the provisions of this Act, for or with reference to—

(a.) The purposes mentioned in paragraphs (a.), (b.), (c.), (d.), and (e.) of section 4 and in section 8 of this Act;

(b.) The direction, conduct and management of the Council, and of its property;

(c.) The summoning and holding of meetings of the Council, the times and places where such meetings are to be held, the conduct of business thereat, and the number of members necessary to constitute a quorum;

(d.) The powers and duties of the president and vice-president, and the selection of substitutes for them if unable to act for any cause at any time;

(e.) The tenure of office, and the powers and duties of the registrar and other officers and employees;

(f.) The election and appointment of an executive committee and of other committees for general and special purposes, the definition of their powers and duties, the summoning and holding of their meetings, and the conduct of business by such committee;

(g.) Generally, all fees to be required, paid or taken under this Act;

(i.) The establishment, maintenance, and effective conduct of examinations for ascertaining whether the candidate possesses the qualifications required; the number, nature, times and modes of such examinations; the appointment of examiners; the terms upon which matriculation and other certificates from universities, schools and other medical institutions shall be received as evidence of qualification; the dispensation of candidates from undergoing examinations, either wholly or partially; and generally all matters incident to such examinations or necessary or expedient to effect the objects thereof:

Provided, however, that—

(i.) The requirements of any curriculum established by the Council, shall not, at any time, be lower than the requirements of the most comprehensive curriculum then established for the like purpose in any Province;

(ii.) The standard of examination shall not, at any time, be lower than the highest standard for the like purpose then established for ascertaining the qualification for registration in any Province;

(iii.) The possession of a Canadian university degree alone,

or of a certificate of Provincial registration founded on such possession, obtained subsequent to the date when this Act shall have become operative, as provided in sub-section 3 of section 6 hereof, shall not entitle the possessor thereof to be registered under this Act;

- (iv.) No retroactive effect shall be given to this Act, and especially as regards persons duly inscribed as students under the laws of any of the Provinces of Canada at the time it shall become operative as aforesaid.

(j.) The recognition of licenses granted by any British, Canadian, colonial or foreign licensing body or authority; the arranging and bringing into effect of any schemes of reciprocity as to registration with any British, colonial or foreign medical licensing body or authority; the terms and conditions upon which, and the circumstances under which, medical practitioners shall be entitled to registration under this Act in cases where such medical practitioners are duly registered or licensed under the Medical Acts of the United Kingdom, or under the laws of any British possession other than Canada, or under the laws of any foreign country, which British possession or foreign country extends reciprocal advantages to Canada;

(k.) The enrolment and registration of all persons entitled under this Act to appear on the register for Canada of medical practitioners;

(l.) Generally, all matters which it is necessary or expedient to provide for or regulate in pursuance of the purposes of this Act and in furtherance of its general intention.

2. No regulation made under the authority of this section shall have effect until approved by the Governor in Council, and such approval shall be conclusive evidence that the regulation has no retroactive effect.

11. A copy of any such regulation certified by the registrar or secretary under his hand and the seal of the Council, may be received in evidence in any court of justice without proof other than the production of a copy purporting to be so certified.

12. The Council shall enact such regulations as shall secure to practitioners who, under the laws of any Province, are now recognized as forming a particular school in the practice of medicine, and to all applicants for registration who desire to be practitioners of such school, rights and privileges not less than those now possessed by them under the laws of any Province, and under the regulations of any Provincial medical council.

13. At each annual meeting of the Council, the Council shall appoint a board of examiners to be known as "The Medical Council of Canada Examination Board," whose duty it shall be to hold the examinations prescribed by the Council, subject to the provisions of section 12 of this Act.

2. The members of the board of examiners shall be eligible for reappointment.

14. The subjects of examination shall be decided by the Council, and candidates for examination may elect to be examined in the English or French language; and the examinations shall be held only at those centres at which there is a university or college actively engaged in the teaching of medicine, and having hospital facilities of not less than one hundred beds.

15. The Council shall cause to be kept by the registrar under the direction of the Council, a book or register to be known as "The Canadian Medical Register," in which shall be entered, in such manner and with such particulars as the Council directs, the names of all persons who have complied with the requirements of this Act and with the regulations made by the Council respecting registration under this Act, and who apply to the registrar to have their names so entered.

16. Every one who passes the examination prescribed by the Council, and otherwise complies with all the conditions and regulations requisite for registration as prescribed in that behalf, shall be entitled to be registered as a medical practitioner.

2. Any person who has received a license or certificate of registration previous to the date when this Act shall have become operative as aforesaid, and who has been engaged in the active practice of medicine in any one or more Provinces of Canada, shall, after six years from the date of such certificate, be entitled to be registered under this Act as a medical practitioner, without examination, upon payment of the fees and upon compliance with the other conditions and regulations for such cases prescribed by the Council.

3. Any person coming within any of the classes of registered or licensed practitioners to which paragraph (j) of section 10 of this Act applies, shall be entitled to be registered upon complying with the orders and regulations established by the Council in that behalf.

17. Any entry in the register may be cancelled or corrected upon the ground of fraud, accident or mistake.

18. In any case of an application for registration or for correcting or amending any entry upon the register, the applicant, if aggrieved by the decision of the registrar, may appeal to the Council, and the Council shall hear and determine the matter; but all applications to cancel or strike off entries from the register made adversely to the person whose registration it is desired to affect shall be by the registrar referred to the Council, and the Council shall, after three months' notice sent by post, prepaid and registered, to the last known address of such person, who shall have the right to appear by counsel, hear and determine all such applications.

19. If it is made to appear to the Council, after inquiry, that any person registered under this Act has been convicted, either in any part of His Majesty's possessions or elsewhere, of an offence which if committed in Canada would be an indictable offence under *The Criminal Code*, 1892, and its amendments, or that he has been guilty of infamous or disgraceful conduct in a professional respect, then, whether such offence has been committed, or such conviction has taken place, or such infamous or disgraceful conduct has occurred, either before or after the passing of this Act, or either before or after the registration of such person, the Council shall, after three months' notice sent by post, prepaid and registered, to the last known address of such person, who shall have the right to appear by counsel, direct the registrar to erase the name of such person from the register: provided, however, that if a person registered under this Act has likewise been registered under the laws of any Province, and such provincial registration has been cancelled for any of the causes aforesaid by the authority of the Medical Council for that province, the Council shall then, without further inquiry, direct the registration of such person under this Act to be cancelled.

2. The name of a person shall not be erased under this section—

(a.) Because of his adopting or refraining to adopt the practice of any particular theory of medicine or surgery; or

(b.) Because of his conviction out of His Majesty's possessions of a political offence against the laws of any foreign country; or

(c.) Because of his conviction for any offence which, though coming within the provisions of this section, is, in the opinion of the Council, either from the trivial nature of the offence or from the circumstances in which it was committed, insufficient to disqualify a person from being registered under this Act.

20. Whenever it is made to appear to the Governor in Council that any of the provisions of this Act are not complied with, the Governor in Council may empower the Commission of Arbitration hereinafter provided for, to inquire in a summary way into and report to him whether such is the case and, if so, to prescribe what remedies are necessary, if any.

2. The Governor in Council may require the Medical Council of Canada to adopt the said remedies within such time as he, having regard to the report of the commission, thinks fit to appoint. In default of the Council so doing, he may by Order in Council amend the regulations, or make such provision or order as he deems necessary to give effect to the decision of the commission.

3. The commission of arbitration shall be composed of three members, one to be appointed by the Governor in Council, one by the Medical Council in Canada, and the third by the complainant.

4. The commission may compel the attendance of witnesses and examine them under oath and require the production of book and papers, and shall have such other necessary powers as are conferred upon it by the Governor in Council for the purposes of the inquiry.

21. This Act shall not be interpreted as authorizing the creation of medical schools, or otherwise giving medical tuition.

DOSIMETRIC ALKALOIDS.

BY GUY L. LARAWAY, M.D.

HAS anything that can be said in favor of the alkaloids and the dosimetric method been left unsaid? It would seem not, and at first thought would seem ridiculous to undertake to make anything that is already so obvious more so; and still with each number of the *Clinic* come one or more articles from the pens of as many alkaloidists, reiterating the same facts in new words and in old words giving new force to the issue in hand. A large majority of physicians, and among them some of our brightest medical lights, continue in the old rut of guessing.

No manufacturing house puts out any two lots of fluid extracts or tinctures of the same strength in the active principle, that part upon which the medical action depends; and how can physicians learn by their own observation what dependence they can put in their remedies in this way? How many of us can remember in some particular case of the splendid results we got, and saved a life perhaps, and when in a second case just like the first we have tried the same remedy and looked for the same results, and been doomed to disappointment?

And since becoming acquainted with the use of the alkaloids, did we ever experience such disappointment? I can answer, never, for myself, and am safe in answering the same for others. Why will physicians be so blind as to give the fluid extracts and tinctures, containing active principles antagonistic to each other? And the echo answers, Why? If you should start out some day of leisure and come up with a man running an engine, and you saw at once the engine puffing and blowing, with part of the drivewheels whirling one way and part the opposite way, and the engine making no progress either way, and upon enquiring the engineer would tell you: "Why, you see, the man who put this engine together got the power mechanism mixed, so that one cylinder drives one set of wheels one way and the other cylinder drives another set the opposite way," and when you ask him why he doesn't fix it, as he knows the trouble, he says: "Oh, well, this is the way it was put together.

and if it doesn't go the way I want it to, it's no fault of mine. This is good enough for me. You would say: "Why, that man is a fool, for trying to accomplish anything that way while he knows the remedy." Pray tell what else are the physicians doing but running their wheels in opposite directions when they are giving antagonistic principles. It is much a quandary to me why they will persist in this, and continue to guess. I am entirely alone in the use of alkaloids in this section of the country, there not being another physician in consulting distance who uses the alkaloids; and the thought of calling counsel when I have a severe case is not a pleasant one. I will describe a case that actually occurred:

I was called at midnight to see a patient, man, 48, robust, full habit, not a weak point in his whole physique. He had a severe chill, had had pneumonia twice before, and knew the symptoms, so the wife suggested that I call Dr. S. in consultation, for she did not want to leave a thing undone that was possible; this being the third attack, she was fearful of his life. With examination for diagnosis, I opened my case and dropped a glonoin granule on his tongue and said: "We will direct our efforts to scatter the chill, which will only take a minute or two;" feeling so sure of my remedy, and confident that I would see my patient relax and the chill a thing of the past before the third glonoin granule, one every ten minutes. If I could divert the attention of the friends for a few minutes they would see the improvement, and the question of counsel would be left until morning; and I felt that by morning he would not only be without need of counsel, but of a doctor as well. When I spoke of scattering the chill in so short a time I met an incredulous look all around, but I felt bold enough to say, "you'll see," and by the time I had kept the attention of attendants and friends, while I was calling for a glass, spoon and water, and had prepared a solution of defervescent compound, and dropped a ten-grain powder of calomel on the tongue, our patient was relaxed completely, and all signs of chills gone. "Well, I never saw anything like that," and similar remarks went around. Now, everything being quiet and excitement passed off, I proceeded to examine my patient. (I knew glonoin would relieve a congestion and scatter the chill, even if I did not know its cause or location.) Respiration 40, with the characteristic exploratory explosion of pleuro-pneumonia, temp. 105.5, pulse 140, the whole left lung congested, crepitant rales over the whole area, with the acute burning pain extending into the shoulder that we so often get. I ordered glonoin every half-hour, defervescent comp. every fifteen minutes in solution until effect, then every hour. At 8 a.m. next morning, resp. and pulse were normal, but temp. 99.8, all pain gone, a loose painless cough, raising abundant rusty sputa.

The vision I saw, when I first came to the case, and counsel suggested if I had used no strategy, was Dr. S., recommending

salol, phenacetine and quinine; and if I would have insisted on giving my little pills instead, I can imagine Dr. S's surprise, and hear him say: "What, do you propose to discard these old, reliable, tried and proven remedies to experiment with these new-fangled things?" And I can hear my dismissal with, "Well, Dr. S., if Dr. L. has gone crazy you had better take the case." Of course I don't get it quite as rough as that when I call in counsel, as I have pictured here, but if my counsel is a warm friend he gives me a look of long-suffering pity, as he says: "If this was my case I would push quinine and phenacetine right along," and if he is not a warm friend he is apt to try and prejudice the friends and my patient, with the air he puts on, if not outspoken.

If the profession were now to adopt the alkaloids as a body, it would be a step in advance attained, in saving life and preventing human suffering, more than we can expect from all other attainments and scientific research.

In the last three weeks I have aborted from a dozen or fifteen cases of pneumonia, as quickly and unmistakably as the case mentioned: and the only case I have failed in was a baby three months old, which had been sick ten days when I saw it, where disintegration had already set in, the baby dying during my second call.

I omitted to mention intestinal antiseptics in the treatment of my case, which I used and do invariably. While my medicine case contains about 100 different granules and compounds, still if I were to find myself face to face with an acute condition, with only my pocket-case, containing only aconitine, Defervescient Compound, Dosimetric Trinity, calomel, Saline Laxative, glonoin, calcium sulphide and iodised lime, I would have no fear and trembling of not being able to meet the immediate emergency. Of course the corks are drawn often from my arbutin, asparagin, colchicine, digitalin, emetin, lithium benzoate, and less often from eighty others; yet I consider the first few mentioned, among which I should have mentioned atropine, apomorphine and pilocarpine, the first and most important with which, when we understand them perfectly, speaking for myself, I feel a confidence I never dared to feel before.

Why, when brought face to face with any of the acute febrile diseases, after they are fully established, if not gone too far beyond this, I dare stake my reputation on my ability to abort, and bring the indications, pulse, resp. and temp. to a normal condition, in from 12 to 36 and 48 hours. We will give the same testimony, but could we have given such testimony as this, before we became familiar with these known quantities of active principles, and prescribed the unchangeable and accurately measured granules?

We are often put in the false position of being accused of confining ourselves entirely to alkaloids, but this is an erroneous idea of our Galenic brothers. Their names are legion, the medicines

that cannot be prepared into granules. Neither are all medicines used in dosimetric alkaloids. There are many others such as acids, glucosides, resinoids, a great many of the metallic salts and a great many chemical combinations. One alkaloid that I have never seen any literature on is berberine, and when I sent for Shaller's Guide some months ago it was with the hope that I would find it there, but he does not mention it. All I have seen on berberine has been among the answers to queries in the *Clinic*, but I have observed its usefulness in malaria, when the spleen is enlarged and tender. I hope some one who has studied it and feels competent will soon give us a full write-up on it.

Among the false and erroneous impressions of our Galenic brothers there is none so gross as theirs on aconite. I consider aconitine one of the most valuable, wonderful, indispensable and never-failing agents of the known medical world. In acute febrile diseases I pull the cork of my aconitine bottle more than any other, for I find it indispensable in all of these cases; and any physician who will give it a fair trial will find it has no equal as a febrifuge. It seems almost incredible, but a fact nevertheless, that in cases of children and babies one or more granules, according to age, in 24 teaspoonfuls of water, is all that is needed; and what other medicine can be so easily given to children, on account of the tastelessness?

And then the Dosimetric Trinity, in pale, weakly babies, does not only insure against any possible harm, but improves the strength of a weak heart. I have never found it necessary to give the Defervescent Comp. to children under six years, but would not hesitate to use it for a full, bounding pulse, with exceedingly high temperature and dry parched skin, with perfect assurance of soon getting moist skin, soft and slowed pulse, and reduction of temp.

There! If there is no virtue in repetition, there is none in what I have said, for it is certainly repetition. I feel almost silly to enclose this to you, for the reason that all this has been said so many times; but where the facts are so obvious, and still so many unconverted, what can we do but reiterate. If a large proportion of the inhabitants of the earth did not yet know and believe the earth revolved on its axis, we would still see those old calculations and proofs setting forth the facts, but as it is a universally accepted fact, such calculations and proofs are things of the past four hundred years, and I only wish the universally accepted calculus of alkaloidal dosimetry was a yearling.—*Alkal. Clinic.*

SOMNOS—CHLORAETHANAL ALCOHOLATE.

SOMNOS, which has the chemical formula $C_9H_{11}O_6Cl_9$, is formed by the synthesis of chloraethanal with a polyatomic alcohol radical. It forms a dense semi-solid body, soluble in all proportions of water, is free from local irritation to mucous membranes, and is not changed by the gastric juice.

Physiologic Action.—In the human being Somnos produces a sound, dreamless sleep of several (average six to eight) hours' duration, from which the patient awakens refreshed and without the headache, languor, mental confusion, and intoxication-like symptoms which commonly follow the usually employed hypnotics. The sleep produced by Somnos differs in no perceptible essential from that of a normal healthy man; records of the frequency and volume of the pulse and respiration show no diminution from the same in normal sleep.

This nature-simulating sleep induced by Somnos is due to the sedative action of the product upon the psychic and motor functions of the brain; this has been indisputably proven by extensive experiments upon the lower animals.

Before Somnos was tried upon human beings, careful comparative tests were made upon the lower animals, under exactly similar conditions, with chloral hydrate and several of the well-known newer synthetic hypnotics. The majority of these comparative tests were made between Somnos and chloral hydrate, because preliminary animal experiments proved that, of all the hypnotics employed, chloral hydrate is the most reliable, and because this remedy is so widely employed that accurate knowledge of the relative merits of Somnos and chloral hydrate was deemed desirable. All comparative tests showed that Somnos, given in twice the fatal dose of chloral hydrate, merely produced natural sleep, from which the animals awakened in a normal condition. It is, therefore, self-evident that Somnos is a much safer hypnotic than chloral.

Furthermore, careful comparative studies of the effects of Somnos and chloral hydrate upon the heart, respiration, vaso-motor and thermotaxic centres in the medulla, show that while, as is well known, chloral hydrate depresses and ultimately paralyzes these, Somnos, even in twice the sleep-producing dose, has no appreciable effects upon them; hence it is clear that the therapeutic dose of Somnos can have no deleterious effects upon the heart, circulation, respiration or temperature of human beings. Somnos is free from effect upon digestion, the bowels and kidneys.

As the results of clinical trial in hospital and private practice, four very important facts have been established:

1. That Somnos is a *reliable, uniformly active* hypnotic; this

fact was noted even in those cases uninfluenced by chloral and the usually-employed hypnotics.

2. The sleep produced by Somnos exactly simulates *natural sleep*. This fact corroborates the results of animal experiments, which show that the dominant action of Somnos is upon the cerebral cortex (psychic and motor areas).

3. That Somnos is a safe hypnotic, free from depressing influences upon the heart, circulation and respiration. This was proven by administering Somnos to patients the subject of organic heart disease (myocarditis, valvular affections) and pulmonary lesions (emphysema, pneumonia, etc.).

4. Somnos does not induce unpleasant by- or after-effects. Languor, headache, vertigo, nausea, vomiting, giddiness, mental confusion, and digestive disturbances, which are practically always present after the use of chloral hydrate and most, if not all, hypnotics, are not induced by Somnos.

Indications.—Somnos is indicated in sleeplessness, from what ever cause; compared with chloral hydrate, it is safer, more reliable, and free from bad after-effects.

1. In the insomnia of nervous affections, such as hysteria, neuralgia, nervous irritability, etc., Somnos produces natural refreshing sleep.

2. In the mental excitement of acute mania, delirium tremens, dementia, and chronic insanity, Somnos is preferable to all other hypnotics, because of its selective sedative action upon the disturbed psychic and motor areas of the brain.

3. Sleeplessness occurring in the course of organic cardiac disease (valvular affections, myocarditis, fatty degeneration, etc.), may be safely overcome by the judicious use of Somnos.

4. In acute infectious diseases, such as typhoid fever, pneumonia, and influenza, accompanied by insomnia, Somnos produces excellent results because of its freedom from depressing effects upon the enfeebled cardiac and respiratory functions.

5. In insomnia due to *pain*, Somnos produces sleep in the majority of cases; it is, therefore, of service after surgical operations.

6. Somnos yields satisfactory results in a large proportion of the cases in which chloral is without effect, and particularly in patients with wrecked nervous systems, for whom hypnotics are necessary, but are usually found of transitory or negative value.

7. Somnos is of especial value in the insomnia of the eruptive diseases of childhood.

Somnos is furnished in fluid form only.

Directions.—The average hypnotic dose of Somnos is from one dessertspoonful to one tablespoonful; repeat once or twice if necessary. As a sedative, one to two teaspoonfuls, repeated at intervals of three or four hours. For children, one-half to one teaspoonful, according to age; repeat once if necessary.

The hypnotic effect of Somnos is sometimes rather slow in developing; this is due to the gradual evolution in the system of its active hypnotic ingredient. Hence, it is advisable to administer Somnos several hours before the desired advent of sleep; this may be in the afternoon, early evening, or according to circumstances.

ON THE DISINFECTION OF THE HANDS.

BY PROFESSOR TH. PAUL AND PROFESSOR O. SARWEY.

THE authors have made a critical examination of a large number of methods on disinfection of the hands, and have come to the conclusion that no one of them renders the hands absolutely germ-free. In the absence, however, of a method that fulfils the ideal requirements in the cases, they advocate disinfection by means of mercurial combinations as the best at our disposal.

As regards the Sublamine method, Paul and Sarwey state "it is about as effective as the Furbringer method," which is the one most generally used at the present time. This method, as is well known, consists of three procedures: Washing the hands with soap and water, treatment with alcohol, and, finally the use of sublimate. These procedures are reduced to two by the Sublamine method, the alcohol, which is expensive, being entirely omitted. Since its bacteriological effects are equal to those of the Furbringer method, this simplification is an important improvement; and this is still more the case since the Ethylenediamine-Mercury does not injure the operator's hands in any way, whilst the sublimate frequently occasions irritative symptoms.

The authors entirely agree with the conclusions that Professor Kroenig and Dr. Blumberg have come to. After infection of the hands with tetragenus germ the Ethylenediamine-Mercury solutions, especially when employed in the stronger concentrations, are entirely equivalent to the 1: 1000 sublimate solution in disinfectant power; and, in consequence of the absence of any cauterant effect, they have the great advantage that they can be employed concentrated, and hence exhibit a more certain disinfectant action when the hands have been in contact, for instance, with highly virulent pus.

Paul and Sarwey also recognize the importance of the absence of irritative action when Sublamine is employed. The cosmetic care of the skin of the hands has been acknowledged by most authorities (as for instance, Haegler) to be an important element of the disinfection problem; and this can be much more easily and thoroughly effected with the non-irritant Sublamine than with the caustic sublimate solutions.

* Experimental Investigations from the Bacteriological Laboratory of Professor Doderlein's University Gynecological Clinic at Tübingen.

The hands are to be thoroughly scrubbed with soft or a sand soap, lukewarm water, and a nail brush, for from eight to ten minutes, and then well rinsed in water. They are then treated for five minutes with a nail brush and a warm 3: 1000 Sublamine solution, made by dissolving three tablets in a quart (1 litre) of water.

Alcohol need not be employed.

The tablets dissolve very quickly, and cause a pleasant softening of the water. A vial of Sublamine tablets in the pocket-case enables the practitioner to sterilize his hands before and after operations and after visits to patients suffering from infectious diseases.

Sublamine is equal to bichloride of mercury in toxicity and bactericide effect, and is to be used in the same strengths.—Abstract from the *Munchener medicinische Wochenschrift*, Nos. 37 and 38, 1901.

THE SYMPTOMATIC TREATMENT OF TUBERCULOSIS.

IN a paper, "The Symptomatic Treatment of Tuberculosis," by Dr. Karl von Ruck, published in the *Journal of Tuberculosis*, Asheville, N.C., January, 1902, the author, under the caption, "The Treatment of Pneumonia Complicating Phthisis," says:

"Until recent years, I had much faith in the administration of one or two full doses of quinine (10 to 15 grains), and while I still believe its use to be valuable, I have, for the present, abandoned it in favor of full doses of creosotal, which has appeared to have a decided influence in diminishing the ordinary duration and in bringing about resolution of the pneumonia process. My experience extends now over upwards of twenty cases, in none of which the pneumonic area progressed to caseation as is so apt to be the case in pneumonias complicating pulmonary tuberculosis, especially if the inflammatory area is already the seat of tubercle. This may be, of course, a fortunate coincidence, and I would still consider it so were it not for the favorable results reported by various clinical writers in other forms of pneumonic inflammation."

In the same paper, under the heading, "The Treatment of Hemorrhage," Dr. von Ruck again recommends creosotal:

"Although the benefit from expectorants is not susceptible to proof, I can say that I have seen fewer pneumonias since using them after severe hemorrhages than I did before, and if the favorable reports, and my own favorable experience of the action of creosotal (carbonate of creosote), or carbonate of guaiacol, in the treatment of pneumonia is further confirmed, we may hope that their administration for the first three or four days in the cases under consideration, may still further reduce the frequency of this serious sequela to hemorrhage."

Proceedings of Societies.

THE ONTARIO MEDICAL ASSOCIATION.

THE twenty-second annual meeting of the Ontario Medical Association opened in the Normal School Buildings, in this city, on June 4th. It was by a long way the best meeting of this rapidly growing body that has taken place for many years past, this being attributable to the exceedingly able manner in which the President, Dr. N. A. Powell, conducted the proceedings, not to speak of the way in which he and the General Secretary, with the various committees, worked for months past in order to ensure the annual convention being a notable success. The attendance was good, 185 members having registered and paid the annual fee. The general spirit of the meeting was most enthusiastic, each one present seemingly bending every effort to make the convention what it should be. The list of the papers read was large, and their quality, as also the character of the various discussions and the exhibition of clinical cases, lantern slides, etc., could hardly have been improved upon. We were glad to see that so many of the papers read were contributed by members of the profession outside of the city, and we trust that this will continue to be so. Our space this issue unfortunately prevents our publishing a full report of the meeting, though we hope to present our readers from month to month with many of the papers read. The morning session of the first day was opened with a few words of welcome from the President, Dr. N. A. Powell, who assured all how happy he was to see so large a gathering at the twenty-second annual meeting of the Ontario Medical Association, and expressed the hope that their two days' session would not only be enjoyable, but exceedingly profitable to all who were present. A very able paper was read by Dr. J. L. Davison, of Toronto, entitled "Some Points in Life Insurance." It was full of most practical matter, the author impressing his hearers with the importance of more careful attention being given to life insurance examination, and asked practitioners who lived out of the city to remember the fact that, by their sending in carelessly filled-out reports as to applicants for insurance to the Medical Director, who never saw the applicant, and knows nothing about the subject desiring insurance, they very often greatly prejudiced their own and their patients' best interests, and instead of the Company paying a fee of \$5.00 to the medical man

for the examination, they would frequently prefer to pay \$50 for none at all, so unsatisfactory are some of them.

Others papers read at the morning session were: "Transplantation of the Omentum into the Abdominal Wall, for the Relief of Ascites due to Cirrhosis of the Liver," by Dr. G. A. Peters, Toronto, which we will publish next month; "The Cure of Chronic Bright's Disease by Operation," by Dr. Alex. Primrose, of Toronto; "Tonsillar Hypertrophy, its Operative Treatment, and the Comparative Value of the Different Methods," by Dr. Perry S. Goldsmith, of Belleville; and "Some Comparative Results of the Medical and Surgical Treatment of Appendicitis," by Dr. J. P. Armour, of St. Catharines.

In the afternoon the session was opened by the President, who read his annual address. It was a most masterly effort and practical to a degree.

One topic upon which he touched was the proposed Dominion Medical Council. Upon this his position was that in regard to the regulating of the study and practice of medicine by legislation, Ontario is in advance of any other Province or State on this continent. "What we in Ontario must guard with jealous care is the standard which we now have. There must be no levelling down to meet the needs of schools in any other part of the Dominion. Pledges will not suffice. We must have the power to prevent its being done, and if we have such power, and use it, I am exceedingly doubtful if we shall ever see the Act in operation." In this connection Dr. Powell referred to recent proposals to reorganize the Medical Council, opposing the suggestion to limit the representation of universities and homeopaths on the council. The latter, he observed, are diminishing in number and influence, "and for us to drive them into making application for separate incorporation and into the position of an oppressed minority, would be foolish in the extreme." He suggested that members of the council who represent charters for medical colleges in abeyance, or universities having no direct influence in medical education, should be dropped.

Dr. Powell referred to the increase in the number of house surgeons through the increase in the number of cottage hospitals. He raised the question of "the advisability of the appointment of a certain proportion of the house surgeons of our larger institutions every six months, with a graded service of eighteen months, instead of our present unsatisfactory plan of appointing all together once a year, and for one year only." In this connection he suggested the withholding of the power of administering anaesthetics from men in the first six months of their course. Reference was also made to post-graduate instruction, the opinion being expressed that in this Ontario is falling behind.

"The continued presence of smallpox in Ontario," Dr. Powell

observed, "the large number of reported cases and their wide distribution are causes of regret, of alarm, and of humiliation. . . . Two of the factors which increase the difficulty of stamping out smallpox undoubtedly are humbug vaccination and a failure to make the differential diagnosis between this disease and chickenpox. . . . Justice fails when a man who spreads smallpox is not made to atone so far as he can for his offence by serving a long term in the penitentiary. May I here raise the question of the necessity of a standard certificate of vaccination, stating the result obtained in each case, and may I in this connection also ask if the time has not arrived for placing chickenpox on the list of diseases which must be reported to our medical health officers?"

Reference was also made to the free sanitarium for cases of incipient phthisis lately established in Muskoka.

After the President sat down, Dr. J. A. Temple, Toronto, read a paper on "Ventro-fixation, its Value and Results." The meeting then divided into sections. In the obstetrical section the following papers were read: "Placenta Prævia," by Dr. H. G. Livingstone, Rockwood; "How Best to Meet Obstetric Emergencies," by Dr. C. J. O. Hastings, Toronto; "Notes on five Cases of Ectopic Gestation," by Dr. R. E. Webster, Ottawa; "The Treatment of Septic Abortion," by Dr. Kennedy McIlwraith, Toronto. In the medical section were read: "Pneumonia," by Dr. David Hoig, Oshawa; "Treatment of Pneumonia," by Dr. J. C. Mitchell, Enniskillen; "A Recent Epidemic of Cerebro-spinal Meningitis," by Dr. Alex. McPhedran, Toronto; "Primary Tracheal Diphtheria," by Dr. R. D. Rudolf, Toronto; "Where Can our Consumptives best be Treated?" by Dr. J. H. Elliott, Gravenhurst; and "Pleurisy with Effusion," by Dr. D. G. Gordon, Toronto.

At the evening session the principal paper was a most interesting one by His Honor Judge McDougall, on "Expert Medical Evidence." Judge McDougall told the Ontario Medical Association why expert testimony in the courts was at such a low ebb, and he went further than most critics, and showed how, in his opinion, this state of affairs could be remedied.

Having pointed out how conflicting medical and other expert testimony often was, with the consequent confusion of the jury, the judge gave his views as to why there was so much conflict. It arose chiefly out of the method of securing and employing such witnesses. At present experts were obtained by the parties to the suit, who, before subpoenaing an expert, took care to find that his opinions were in their favor. The fees came out of the pockets of the man who was to benefit by the testimony. Taking these two things together, they were apt to produce, perhaps wholly unconsciously in the mind of the expert, along with the natural desire to see his side win, a disposition to view the facts with a view to this result. It had, in fact, a tendency to corrupt the witness, not

in the strict sense amounting to moral torpitude, but giving him a bias in favor of that side. A man had to have strong mental honesty not to be swayed under these circumstances.

Then, the experts being witnesses for one side or the other, the cross-examination by the counsel was not conducted for the purpose of getting at the facts, but for the purpose of showing that the evidence adduced by the opposite side was upon a wrong foundation, and therefore absurd.

Judge McDougall proceeded to consider whether there was no better way. He was decidedly of the opinion that there was, by making the expert an assistant or adviser to the court. The court or the State should be the party to designate who the two or three experts should be, not the parties to the case, and their reward should not depend upon the parties, but should be provided by the State. This plan was successfully adopted in the Admiralty Court, where the judge was assisted by two experienced nautical assessors, generally retired sea captains, who sat on the bench on either side of the judge, and gave him assistance in all nautical points. In some such way medical or other expert testimony might be had.

He thought the new act limiting the experts to three, or five, if asked for before the trial began, was a move in the right direction. He urged doctors to give their testimony in popular, untechnical language, and unadorned by superlatives.

Mr. Irving H. Cameron thought that the popular criticism of experts was a harsh one, because the public did not understand the difficulties under which the expert worked. As Judge McDougall had pointed out, only those were selected whose opinions were known beforehand, and as the expert was not giving facts, but opinions on facts, unanimity was not to be expected in the present state of medical science, which rendered two views possible and likely in every case. He noticed that Judge McDougall had not given his own experience, but that of others, and he knew that all medical men appearing in Judge McDougall's court would be fairly treated. On the other hand, he knew that all medical men would welcome any such change in the law as that suggested.

Dr. Harrison, of Selkirk, made a humorous speech in the same strain, and it was evident that the Association endorsed Judge McDougall's stand.

After Judge McDougall took his seat, papers were read on "The Status of the Hospital Interne in Ontario," by Dr. H. S. Hutchison, Toronto; and "Dry Labors," by Dr. Adam Wright, Toronto, after which a series of lantern demonstrations were given as follows: "On Certain Functional and Organic Diseases of the Nervous System," by Dr. H. A. McCallum, London; and "Anomalous Forms of Smallpox," by Dr. C. A. Hodgetts, Toronto. The meeting then adjourned till 10 o'clock Thursday morning.

SECOND DAY'S SESSION.

The session of the Association on Thursday was full of interest, the members being present in goodly numbers, for the opening about 10 o'clock. Dr. N. A. Powell was, as usual, in his place on the platform, and did not do what too many Presidents have been in the habit of doing in the past, viz., absenting themselves from the chair during the greater part of the time, especially on the second day. Dr. Powell stuck faithfully to his post, and by his ready wit, for which he is now well known, and general executive ability, made the second day's meeting also not only instructive, but full of interest, which did not flag from beginning to end. He confined the reading of papers, as well as the discussions, strictly to the allotted time, so that, except in a few instances, little haste was exhibited. The morning session was almost exclusively devoted to the exhibition of clinical cases, the time being well spent and exceedingly profitable. The cases included: Pseudo-Hypertrophic Muscular Paralysis; Muscular Dystrophy; Lateral Sclerosis; Adenoma Sebaceum; An unusual case of Varicose Veins; Extensive Necrosis of the Skull; Chronic Hereditary Trophædema of Lower Extremities; Fracture of Pelvis in a Child, with Complete Laceration of the Perineum by the Ramus of the Pubes, Subsequent Repair of Perineum and Bowel—Recovery; Removal of Stones from Common Bile Duct; Notes of Patient whose Abdomen has been Opened eight times; Three Cases of Transplantation of the Ureters into the Rectum for Exstrophy of the Bladder; An unusual case of Multiple Peripheral Neuritis; Urticaria Pigmentosa; Marked Disability arising from Fracture of Coccyx—Relief by Amputation of Coccyx; Chronic Intestinal Obstruction Cured by Operation; Three Cases of Pyothorax; Splenic Leukaemia.

Pathological specimens of Multilocular Cyst, appendix with eight Enteroliths, Carcinoma of the Prostate, were on view, as also a capital collection of plaster casts by Dr. George Peters, of Toronto. In the Surgical Section, papers were read by:

Dr. C. R. Dickson, of Toronto, on "The Uses of the X-Ray, other than Diagnostic."

Dr. J. E. Hett, Berlin, on "The Use of the X-Ray in Cancer, Lupus, and Hodgkin's Disease."

Dr. John McMaster, Toronto, on "The Results that are being Obtained by the Use of the X-Ray, with Exhibition of Patients."

Dr. Beverley Welford, of Woodstock, on "Stricture of the Esophagus."

Dr. D. J. Gibb Wishart, of Toronto, on "Hydrobromic Ether—Notes upon its Use as an Anesthetic in Adenoid and Tonsil Operations."

Dr. J. Price-Brown, of Toronto, on "The Use of India Rubber Splints in the Treatment of Deflected Nasal Septa."

In the Medical Section, the following papers were read, one or more taken as read:

Dr. C. D. Parfitt, of Gravenhurst, on "Climate and Health Resorts of the Southwestern States."

Dr. Graham Chambers, of Toronto, on "Some Unusual Cases of Syphilis."

Dr. John Gillies, Teeswater, on "Cerebral Embolism."

Dr. J. T. Duncan, Toronto, on "How much Ophthalmology should the General Practitioner Know, with Special Reference to the Discovery of the Cause of Headaches."

Dr. H. B. Anderson, Toronto, on "Tabes Dorsalis, with Involvement of Cranial Nerves."

Dr. W. H. Thistle, Toronto, on "A Case of Brain Tumor, with Interesting Localizing Symptoms, with Specimen."

Dr. John Hunter, Toronto, on "A Case of Acute Nephritis."

The Committee of Arrangements served an excellent luncheon in the hall at the rear of the Auditorium, and it was thoroughly enjoyed. After lunch was over, the usual toasts were duly honored, and speeches delivered by the President, Dr. Roswell Park, of Buffalo, Dr. A. R. Robinson, of New York, Dr. Garrett, of Kingston, Drs. R. A. Reeve, J. B. Geikie, J. A. Temple, J. W. Cotton, G. A. Bingham, and others. A notable item on the programme, and one which "brought down the house," was the Scotch song by Dr. A. A. Macdonald, "the only song he knows," the President said. The chorus was joined in by all. The speech by Dr. Harrison, of Selkirk, and that by Dr. Geikie were capital, the latter being full of vim and loyalty, showing that the old man of Trinity Medical School is still a long way from being dead yet.

During the afternoon session Dr. Roswell Park, of Buffalo, gave the Association the benefit of an exceedingly clever paper on "The Gall-Bladder, its Structure, and Diseases to which it is Liable." He compared the gall-bladder with the vermiform appendix, and took the ground that when abnormal it should be removed and not treated. The paper was prepared for the meeting of the New York Medical Association.

Another welcome visitor was Dr. Knopf, of New York, one of the recognized authorities on the subject of tuberculosis, who gave an address. He spoke in the strongest possible condemnation of the resolution which he understood had been adopted by the Congress of Tuberculosis in New York, to the effect that tuberculosis was an acute infectious disease. Dr. Knopf said that if such action had been taken nothing could do more harm to the movement for the prevention of the disease than the teaching of any such erroneous doctrine. The members of the Congress, he feared, were suffering from "phthisiphobia," and the publication of any such a statement could accomplish no good. Dr. Knopf said

phthisis was spread by the sputum, and it was not an acute infectious disease.

Dr. A. R. Robinson, of New York, was also a guest of the Association during the afternoon.

The next business was the election of officers for the year, which resulted as follows: President, Dr. J. C. Mitchell, Ennis-killen; first Vice-President, Dr. George A. Bingham, Toronto; second Vice-President, Dr. W. G. Anglin, Kingston; third Vice-President, Dr. J. W. S. McCullough, Alliston; fourth Vice-President, Dr. J. D. Meikle, Mount Forest; General Secretary, Dr. Harold C. Parsons, Toronto.

Reports of the various committees were presented and resolutions passed, the most important of which gives the Publication Committee power to print the proceedings of the session.

The remainder of the afternoon was devoted to papers on "Technique of the Removal of Tuberculous Cervical Glands," Dr. L. W. Cockburn, Hamilton; "Abdominal Neuroses," Dr. D. Campbell Meyers, Toronto; and "Remarks upon Some Eye Cases," Dr. G. H. Burnham, Toronto. The Association then adjourned.

The Auditorium of the Normal School was nicely decorated with Union Jacks, and the platform looked very pretty with its many flowering plants along the edge. The hall of the building, as one came in, was comfortably filled by various exhibits of drugs, surgical instruments, medical books, etc., and we were glad to see that the visiting medicos took advantage of their presence. Among the exhibitors were the firms of Parke, Davis & Co., H. K. Wampole & Co., R. L. Gibson, J. A. Carveth, The Chandler & Massey Limited, F. A. Stearns & Co., and others.

Among the visitors from the other side of the imaginary line were: Dr. Roswell Park, from Buffalo, N.Y., Dr. Knopf, of New York, and Dr. A. R. Robinson, of New York, all of whom the members of the Association were glad to welcome. Dr. Mussen, of Philadelphia, and Dr. Howard Kelly, of Baltimore, were to have been present, but found it impossible to do so at the very last moment.

TORONTO MEDICAL SOCIETY.

THE regular meeting of the Toronto Medical Society was held on May 1st, 1902, the President, Dr. F. N. G. Starr, in the chair.

Dr. Hooper read a paper on "Ectopic Gestation," reporting a case. (See page 21.)

Dr. Eadie said, in discussing the paper, that he had seen eight cases; one case had been operated on for one side, returning later for operation on the opposite side. The diagnosis was difficult before rupture, but after that there were cardinal symptoms: (1) Disturbed menstruation; (2) sudden shock with acute pain; (3)

temperature subnormal, showing the pain was not due to inflammation. He had not noticed any shreds in any but two cases. All cases had said when pregnant that they felt increasing changes in the pelvis, not always a pain, but a discomfort, which was increased while up, and somewhat relieved on lying down.

Dr. Wilson said *re* causation, in the country there was much less inflammatory trouble in the tubes. In the city the question of a gonorrhea in the husband must always be considered.

Dr. Hay reported two cases, one typical; second had ruptured, and was seen thirty hours after, when the woman was "as pale as a sheet." The abdomen was found full of blood clots. It was drained through the vagina and normal salt solution given, but the patient died two days after. The operative procedure had been too long delayed.

The President said the rule to operate as soon as a diagnosis was made was a good one. He cited a case. He said the lymphatics of the diaphragm absorbed rapidly, and it is a good idea to use saline solution to fill up the abdominal cavity after operation, when rupture has occurred. Dr. Hooper, in reply, said on the right side, even after rupture, diagnosis was not easy. The temperature may be down in appendicitis.

Dr. Oldright shewed (1st) a man previously seen by the members, with an epithelioma of the lower lip. It had been removed. (2nd) A specimen, ovarian cyst.

Mr. Crawford opened the discussion on anesthesia by relating a case in which death had occurred.

DISCUSSION.

Dr. Carveth said it was wrong to begin with chloroform, and then change to ether. Gas should be first used, then ether. In Toronto ether was considered the safer anesthetic. It did not cause nausea if the patient was put out of doors or in very fresh air. He objected to the moving of the patient while anesthetized. The head should be turned on the side as soon as the anesthetic is discontinued, and water should be given as soon as the patient asks for it, freely. He raised a protest about the fee, saying that the anesthetist, of the trio—surgeon, assistant, and anesthetist—was the one given the lowest fee, or none at all, if one had to remain unpaid. He considered the fee for anesthesia should equal that of the surgeon, who was in reality taking fewer risks.

Dr. Wilson said that it did not matter what drug was used, they were all dangerous. Only just enough should be given. The anesthetist should not be bound by any set rules, should change if he wished from one to another drug. Air was important in the after care. The patient should have plenty of it.

Dr. Hunter spoke of the dangers of anesthetics. He advocated the drop method of administration, and stated that he had

for four hours kept one patient under with eight drops to the minute.

Dr. Hay said that patients were too often slugged—that was, too much was given at the start. He gave morph. sulph. 8 1-8, atropine, gr. 1-120, half an hour before operation to relieve nervousness. The quick return to consciousness was the evidence of good administration. The proper preparation of the patient for operation, with water given freely, prevented after thirst.

Dr. G. B. Smith said, years ago he had given morphia and alcohol also, but now he preferred to have the patient in a normal condition, free from any drug, when the anesthetic was begun. Dr. Oldright objected to the giving of a purgative the night before operation. It should be given the second night before. The fabric used to drop upon should be thin enough to breathe through. The anesthetist should test this himself before beginning. He objected to the Claver's inhaler for ether, saying the patient should receive pure air.

Dr. Beatty said, in London gas was first used, then ether, never chloroform; the anesthetist had no choice. The head was always turned to one side at once on the cessation of administration; no water was allowed for some time, but ice was given. After some hours a teaspoonful of water was given every hour until sure no vomiting followed, then gradually increased. The a.c.e. mixture was always given to elderly people. A purgative was given the night before operation.

The President said he liked the Claver's inhaler. He was glad to hear Dr. Smith object to drugging the patient and then anesthetizing him. The Society then adjourned.

FINAL MEETING.

The final meeting of the Toronto Medical Society took place on May 15th, 1902, the President, Dr. F. N. G. Starr, in the chair.

Dr. Hay moved that visitors be extended the privileges of the Society, and be asked to take part in the discussion.—Carried.

Dr. H. G. Machell was absent, and his paper was not read.

Dr. S. M. Hay read his paper, "Some Important Points to be Noted in Life Insurance Examinations."

DISCUSSION.

Dr. Oldright said *re bona-fides* of applicant, it was a question how far we were justified in taking statements of applicants. Urinary analysis is now required by all companies. Applicants were not told this by the agents. The urine must not be brought to the office in a bottle, but must be voided in the presence of the

examiner. *Re tuberculosis*: Association with tubercular people is just as important as heredity. Heredity on one or both is important, also any history of straight infection, a single instance of straight infection being much more favorable to the applicant than a case of hereditary taint on one side or the other. He said the remuneration to the examiner was too small for the amount of work and running round required of him. He also spoke of the protection of the examiner, stating that companies too often changed their local examiner to please an agent. This should not be as long as one man is giving satisfaction and doing good work. Preventive medicine was a subject not taken up by insurance companies. Cases of appendicitis operated upon he considered better risks even earlier than Dr. Hay had said, than cases cured without operation even after six years.

Dr. John Ferguson said: Applicants were often first class in one part of the examination, fair in another, and poor or bad in another. As, for instance, personal history may be first class; family history bad; physical examination good or first class; or all first class, and moral and social elements be bad. These must all be considered carefully before recommending a policy. A very important point was the difficulty of making an examination in the applicant's office or place of business. The urine should always be passed so that the examiner knew no substitution, or alteration was possible. It was not always possible to get a sample. A good examiner would always be on the outlook for first impressions—were they good, was he healthy, had he any habits, were the pupils contracted, did he rub his nose frequently, showing the morphine habit, etc. A family history showing early deaths showed a general lack of vitality in the family. He fully agreed with Dr. Oldright *re* cured cases of appendicitis. Some diseases were an advantage, as typhoid, small-pox, etc. He divided alcohol ulcers into three classes: (1) Spree class—a drunk with friends, a jollification. (2) Dysomaniaes—periodical outbreaks ending in delirium tremens, which may be twelve or eighteen months apart, or oftener. (3) Dram drinkers. Classes two and three were rejectable lives. Occupation was important. An indefinite answer should never be taken, as clerk, traveller, etc. The following points of the examination should always be carefully considered: (1) Heredity—the whole family history; (2) personal record; (3) proportionate height, weight, expansion, and measure; (4) occupation, social habits, and moral condition.

Dr. J. Hunter asked what stand medical referees took upon albuminuria, for albumen could be shown in the urine of men in apparent perfect health, at times, and entirely of a transitory character.

Dr. W. Wilson said in a large proportion of middle-aged persons no albumen would be found until after repeated examina-

tions. The urine may be of low sp. gr., but granular casts were frequently demonstrable without albumen being shown by chemical tests.

The arterial tension should be considered; was there any evidence of sclerosis in the radial or temporal arteries. A velvety condition of the skin or spotting were important, and should put the examiner on his guard. The heart-sounds should be proportionate. Men married a second time to young women died sooner than men once married. Syphilis is almost always denied, and should be watched for. He noticed in a recent number of the *British Lancet* that rheumatic personal history reduced the life expectancy according to the experience of the Scottish Widows Fund Society. He also spoke about the appointment of examiners (local).

Dr. Clouse said medical students should receive a special course in insurance examinations. He thought the supreme examiner often made mistakes by laying too much stress upon proportions. It was sometimes very hard to put down for the head office answers received, so as to give correct and proper information. Urinalysis was very important, though sugar may be occasionally found in perfectly good risks. Some individuals were very prone to meet with accidents, and were therefore not first class because of some visual defect or nervous condition, which of itself did not amount to much; only its bearing upon the safety of the applicant. The moral element mentioned by Dr. Ferguson he considered very important. Having had contagious diseases indicated a condition of lowered vitality.

Dr. Ashton Fletcher said that he did not agree with Dr. Hay that tall men were usually better risks. Short men, he said, usually had greater lung capacity. That the difference between expiration and inspiration was usually greater in short men than in tall men. Therefore, Dr. Hay's rule that the mean chest measurement should be half the height was not sound. Short men were less liable to accidents, being more agile, and were sure-footed. *Re preventive medicine:* He noticed some companies were beginning to wake up to this important point. One company was asking the questions: How long after the death of a consumptive did you occupy the same house or room? Have you been closely associated with a consumptive? Another company asks: Have you used patent medicines? If so, for what?

The president said, "Do not write normal." State the facts. A question that should be on every form is: Does applicant in illness use a regularly qualified medical man? It was hard to get a correct family history. Death at childbirth: was it during labor? A week or six weeks after? were questions hard to answer, and meant much to the chief examiner. He knew cases of hernia cured by injection method accepted by companies, though

he considered them unsafe, as he had seen at *post-mortem* a knuckle of intestine attached to the sac by adhesions which formed a stoppage, causing death. Underweight men were prone to tuberculosis. The pulse should be taken with three fingers, in order to be able to accurately and correctly estimate the quality and arterial tension.

Reply.—Dr. Hay said the referee was not justified in accepting cases with sugar in the urine, where found frequently. But many cases might have been accepted. The applicant must be examined thoroughly, even if the local examiner is sure he will not pass. He made the same reply *re* albuminuria as *re* sugar. A very important point was the question: How long have you known the applicant? He would consider much more carefully the recommendation of the local examiner if he had known the applicant some years. Short men with large chests were out of proportion, and usually too fat.

The Treasurer's report and the Recording Secretary's report were read and adopted, showing the Society financially strong, and doing good work. The membership had been increased by eleven during the year, the average attendance being twenty-five.

The officers elected for the ensuing year were: President, S. M. Hay; 1st Vice-President, G. Silverthorne; 2nd Vice-President, J. Hunter; Corresponding Secretary, H. A. Beatty; Recording Secretary, Ashton Fletcher; Treasurer, G. H. Carveth; Committee, F. N. G. Starr, E. R. Hooper, J. H. Fisher.

In introducing the President-elect, the President said he wished him all success and the Society continued prosperity. To him and the Executive he would relegate two things—one, to take into their consideration some plan whereby the promiscuous newspaper advertising of certain members of the profession may be stopped, and also to consider to what extent the practice of paying commissions for cases sent to certain men for operation is carried on, and thus help to elevate the dignity of the profession, a duty that we should ever keep before us.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

THE twenty-fourth annual congress of this Association was held this year in Boston on the 26th, 27th and 28th of May, in the Library Building of Harvard Medical College. Among the subjects of special interest discussed was the large and important one of the use of the X-ray. Many of the men, so far as time limit would allow, had given it a fair trial, and spoke enthusiastically of its use in the treatment of malignant disease. It was too soon, however, in any case recorded, to report a permanent cure, although the benefits derived from its application were undoubted. Pain

had been eased and relieved; diseased tissues had been restored to an apparently normal condition; malignant cachexia had been replaced by an improved condition of skin and mucous membrane; and growths had been either altogether absorbed or materially diminished in size by its influence.

Some observers had, in advanced cases, experienced no beneficial results whatever; while others stated that even in the most severe cases of epithelioma, the course and severity of the disease had been retarded by its use. As a rule the seances were repeated every two or three days, and the time of each application of the tube was limited to ten or fifteen minutes.

Gleitsmann reported a case of subglottic sarcoma, removed endolaryngeally by galvano-cautery snare. It was attached by pedicle, and he believed the removal to be complete. There had been no glandular enlargement. Five months had elapsed since the operation, and there were no indications of recurrence.

The paper created a good deal of discussion for and against the doctor's method of operation. This was led by J. N. Mackenzie, who set his fiat emphatically against all intra-laryngeal operations for the removal of malignant disease. The consensus of opinion expressed was with him in cases of undoubted carcinoma; but with Gleitsmann when the neoplasm was sarcomatous, and under conditions similar to the one he reported. In all other cases, where operation was advisable, external laryngectomy was the operation approved of.

A good paper was that of Clarence Rice, upon changes occasionally seen in the shape of the arytenoids in professional singers and actors. He also dwelt at some length upon the compensatory increase of size and function of the false vocal bands, in cases where the action of the true cords had been impaired.

Hudson Makuen, following his well-known line of curing the stammerer by the application of established physiological principles, presented an interesting case, which fully verified his position; while Braden Kyle opened up the new subject of sialo-semiology, a branch of chemical pathology, as a means of diagnosis. This is a subject which, though at the present time in its infancy, may be destined in the future to occupy a wide place in progressive medicine.

One exceedingly interesting feature of the Congress was a series of addresses delivered in succession in the operating amphitheatre of the University. These were given by Professors Minot, Dwight, and Lothrop, upon development of the tonsils, the growth of the face and pharynx, and the anatomy and cell development of the inferior turbinated. They were all profusely illustrated by charts, giant dummies, and a large variety of pathological specimens.

Among the many papers read at the regular sessions was one

by our townsman, Price-Brown, upon "Rubber Splints in the Treatment of Curvature of the Triangular Cartilage."

This Association contains a limited membership. It is one of the oldest in the land, and next year expects to celebrate its silver wedding, as one of the branches of the Triennial Congress to be held at Washington.

A Turpentine Catastrophe.—An action was tried in the High Court on Friday last in which a lady claimed damages from the Buckeye Bath Cabinet Company under somewhat peculiar circumstances. It seems that the instructions for the use of the cabinet which is a sort of portable vapor bath, comprise the discretionary use of turpentine, a certain quantity of which is to be placed in the water heated by a spirit lamp therein. The plaintiff complied with the instructions, with the natural result that the turpentine which of course floats on the water and is evaporated first, formed an inflammable vapor. This took fire and inflicted serious injury on the unhappy patient, whom the jury invited to console herself with damages to the extent of £100.—*Medical Press.*

Canadian Medical Association Montreal Meeting, September 16, 17 and 18, 1902.—Below will be found a list of papers already promised for the Annual Meeting at Montreal in September next. Members and others contemplating contributing to the success of this meeting should notify the General Secretary at an early date of their intention. Arrangements as to railroad and steamship rates, entertainments, clinics, etc., will be announced in due time. Address in Medicine—Professor William Osler, Baltimore; Address in Surgery—Dr. John Stewart, Halifax, N.S.; Lantern Demonstration on the Exanthemata—Dr. Corlett, Cleveland, Ohio; Paper by Dr. D. Campbell Meyers, Toronto; Paper by Geo. S. Ryerson, Toronto—Subject not yet decided on; Paper by A. Laphorn Smith, Montreal, also Card Specimen; Paper by F. A. L. Lockhart, Montreal, "On some Points of Cerebral Localization, illustrated by a series of Morbid Specimens, and some Living Cases"—James Stewart, Montreal; Paper and Specimens by Dr. Geo. A. Peters, Toronto; "The Country Practitioner of To-day," J. R. Clouston, Huntingdon, Que.; Paper by Dr. P. Coote, Quebec, Que.; "The Pathologic Prostate and its Removal Through the Perineum," A. H. Ferguson, Chicago; Paper by Geo. E. Armstrong, Montreal; Paper by Ingersoll Olmsted Hamilton; Paper by Dr. Casey A. Wood, Chicago, "Empyema of the Frontal Sinus;" "On Tuberculosis," J. F. Macdonald, Hopewell, N.S.; "X-Ray in Cancer," A. R. Robinson, New York; "On Degeneration of the Spinal Cord, Anemia, Mal-nutrition, with Microscopic Specimens," David A. Shurres, Montreal. Dr. Geo. Elliott, General Secretary, 129 John Street, Toronto.

A Shadow and a Hope.

On the eve of our going to press, the Anglo-Saxon nation, arrayed for, or humbly jubilant over, the Coronation, has been saddened and silenced by the dread news of the illness and consequent severe operation to-day submitted to by His Gracious Majesty King Edward. The Royal patient is under the care of the most skilful surgeons the Motherland possesses, so hopefully we await to-morrow's bulletin, as silently all join in the heartfelt prayer—

God Save the King!

JUNE 24TH, 1902.

W. A. V.

VOL. XII.

TORONTO, JULY, 1902.

NO. 1.

Editorials.

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Clinical Medicine—ALEXANDER McPHERDAN, M.D., Professor of Medicine and Clinical Medicine Toronto University; Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, and N. H. BEEMER, M.D., Mimico, Insane Asylum.

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

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Pediatrics—AUGUSTA STOWE GUILLEN, M.D., Toronto, Professor of Diseases of Children Woman's Medical College, Toronto.

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Laryngology and Rhinology—J. D. THORBERN, M.D., Toronto, Laryngologist and Rhinologist, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

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and pressure in these vessels, and thus obviate the occurrence of ascites.

H. Kummel (*Deut. Med. Wochenschr.*, April 3rd, 1902, No. 14, p. 242) reports seven cases in which this operation was performed. In one case, dating back to 1887, owing to a mistaken diagnosis, a simple laparotomy had been done, which, in place of a supposed hydatid cyst, revealed the presence of ascites. The liquid was not reproduced, and the patient got better. In the six other cases in which Talma's operation was performed, two succumbed on account of their desperate condition at the time of operation. A third patient survived the operation three weeks.

In the fourth case death supervened from erysipelas, four months after the operation. At the autopsy it was shown that the ascites had not reappeared. Finally, in the last two cases in which the operation had been done six and eight weeks respectively prior to the report, ascites had not reappeared, and the general condition had been improved. Dr. Kummel did not think that Talma's operation would be capable of curing cirrhosis. However, its undoubted action on ascites, as well as on hypertrophy of the liver and of the spleen, causes it to be regarded as a most valuable procedure in cases in which ascites becomes particularly annoying to a patient.

At the annual meeting of the Ontario Medical Association, June, 1902, Dr. George A. Peters, Toronto, exhibited a patient upon whom he had successfully performed Talma's operation for cirrhotic ascites.

He favored a supra-umbilical incision of from four to five inches in length, which allowed the surgeon sufficient room in which to make the required manipulations of the parts. Dr. Peters had in his case taken four omental grafts, two from the right and two from the left side of the great omentum, and inserted them into the abdominal parietes, in which they were retained by sutures, in the following manner: By making two longitudinal incisions about 1 1-2 inches long in the parietal peritoneum, at a distance from one another of about an inch, he was able to raise a strap of peritoneum in such a way that a large graft of omentum could be drawn by forceps into the pocket thus made. By preference, portions of omentum containing large veins were selected. In addition a large graft of omentum was drawn through the suspensory ligament of the liver in the hope that its veins might con-

tract anastomoses with the vein in its free border, which on one occasion Talma found to be as large as the finger.

He had not practised massage or scarification of the surfaces of the liver, and of the parietal surfaces of the peritoneum, with gauze, which had been recommended by Talma and Drummond as being conducive to the establishment of vascular adhesions between these surfaces. The patient had been tapped prior to this operation at intervals of from eight to twelve days, for about two months. At the time of the first tapping the patient's abdominal circumference was 64 inches, and on that occasion three patent pailfuls of fluid (estimated at 1,100 ounces) were removed.

After the operation the fluid reaccumulated, and tapping was required at intervals for some three months (seven times in all), but the intervals gradually increased in length, and the amounts withdrawn progressively diminished. The last tapping occurred in November, 1901. The fluid has since ceased to accumulate in troublesome quantities, though there is still some effusion in the peritoneum. At present he is in fairly good condition, having no appearance of ascites, or edema of the extremities. His complexion is slightly congested, but his general appearance indicates good health. Inspection of the abdomen revealed a number of largely dilated veins coursing over its surface. Dr. Peters' case is certainly most instructive, showing that although cirrhosis may not be cured, its most formidable symptom, ascites, can be completely relieved.

Of course, it is true that in some cases repeated tapplings have, by the establishment of several vascular connections between the portal system of veins and the systemic veins in the walls of the abdomen, relieved ascites. Dr. Peters' patient was tapped four or five times previous to the operation without relief to the ascites. After the operation the fluid reaccumulated rapidly, so that it had to be removed by aspiration seven times. In spite of these recurrent attacks of ascites, which seemed to forebode a bad result, the fluid has ceased to reaccumulate, and the present condition of the patient gives no impression whatever that he had ever suffered from well-marked ascites. His present waist-measurement is 43 inches—his measurement prior to the operation was 64 inches.

J. J. C.

PREVENTION OF DIPHTHERIA.

THE existence of a case or cases of diphtheria in a public school is, of course, a matter of great importance not only for the patients themselves, but for their companions as well. An examination of the children attending a school, in Paris, France, in which forty-two cases of diphtheria had occurred, showed that in several instances, the Klebs-Löffler bacillus was discoverable in the throats of children, who had not been attacked with the disease. In all 231 children were examined, of whom 42 had diphtheria, 42 had not diphtheria, but had the Klebs-Löffler bacillus in their throats, 66 had the short bacillus (doubtful diphtheria), 81 had neither short bacilli nor Klebs-Löffler bacilli.

The examining physicians, Drs. Netter and Martin, forbade the children who had Klebs-Löffler bacilli in their throats from attending the school, and the epidemic of diphtheria, which, up to the time of their adopting this procedure had been very severe, having caused outbreaks in 42 children, immediately subsided. Only two other cases were noted subsequently in that school, and it is quite likely that these patients were infected from some outside source. Moreover, the cessation of the outbreak among the children attending this school was followed by a notable diminution of cases of diphtheria among all the children of that neighborhood. Relying on these facts, Drs. Netter and Martin think that, in dealing with outbreaks of diphtheria among school children, strict measures of repression should be adopted. Children found to have Klebs-Löffler bacilli in their throats should be kept under observation until their throats are declared to be free from these bacilli. Preventive injections of anti-diphtheritic serum should also be administered to other children who had been in contact with the children in whose throats the Klebs-Löffler bacilli have been discovered. By taking precautions of this kind, outbreaks of diphtheria in large schools can be prevented from attaining great dimensions.

The discovery of Klebs-Löffler bacilli in the throats of persons who have been exposed to diphtheria, but who have not been attacked with the disease, would thus seem to be of the first importance. Physicians, nurses, and attendants in such cases are liable to have these germs in their throats, and may thus prove infective to other

persons with whom they come in contact. As a preventive measure oral antiseptics should be regularly practised by those who come in contact with diphtheria for their own benefit as well as to obviate the extension of contagion to other persons. There can be no doubt that a bacteriological examination of the throats of physicians and attendants exposed to diphtheria would be useful in preventing the spread of diphtheritic contagion. J. J. C.

A CANADIAN'S "LOOK-IN" AT THE AMERICAN MEDICAL ASSOCIATION.

SARATOGA—full of sunlight, smiling men and women meeting, greeting, and tarrying for half a week of days to attend the annual convention of the great American Medical Association. The Convention Hall is well arranged for its purpose, and blessed alike, these many moons, by meetings of Sunday School Alliances, Distillers, Sons of the Morning, Sons of the Evening (the names are not copyrighted), Jew and Gentile; in fact, all sorts and conditions of men, running the social gamut, all the way up to the splendid fifteen hundred Knights of the Scalpel, who delved into the deepest scientific problems all day, and dined and danced far into the night. Saratoga, although of late years very cosmopolitan, is diplomatic in the extreme. She knows whom she is welcoming, and arrays herself fittingly to entertain her guests.

Let us congratulate again the able President, Dr. Wyeth, and the Secretary, Dr. Simmons, upon the success of the meeting, the former upon his splendid equipoise and able presidency, and the latter upon his untiring and energetic work as General Secretary. The many different sections were conveniently arranged, and the papers, although perhaps too generous in number for the time allotted, and were comprehensive enough to make one wonder "how one little head could carry" away half the interesting facts the ears listened to.

The enormous United States Hotel was "Headquarters," and to join in the throng of promenaders upon its spacious verandas and lawns, whose huge trees were ablaze with lanterns and devices of colored lights, and listen to the concert, band and vocal, arranged in honor of the delegates, was indeed a pleasure. To drive through old Saratoga's streets under the avenues of trees out to the various

springs, and play "follow-the-leader," until at last the funny man of the party, as we drew up at still another Spouting Geyser, relieved our sense of polite obligation (the water was offered freely) by laughingly saying, "You may drive a horse to water, but you can't make him drink"—any more! Sometimes discretion is the better part of valor. No one present will ever forget the privilege afforded of visiting one of the most palatial summer residences in America, owned by Mr. and Mrs. Spencer Trask, who generously invited the members (and their wives) of the Association to an "At Home" from 5 to 7 o'clock at "Yaddo," where, after a drive of a couple of miles out of Saratoga proper, the home of Mr. Trask was seen amid a perfect garden of the gods, rising terrace upon terrace, and surrounded by trees and rose gardens of exquisite beauty, comprising in all a park of fourteen hundred acres. An orchestra stationed on the stone balustrade and an entrance magnificent in dimensions, a hall with flowing fountains, grand fireplaces, paintings rare and costly, and a dining-room fit indeed for King Edward to grace its board, with a library where the muses sit enthroned, and perchance the ghosts of Shakespeare and a troop of the Poets steal softly in on moonlit nights, and finger lovingly the wondrous collection of books, the best thoughts of men of all ages, which even a peep at on that June day will be a memory for ever in the garish life of the physicians, who scarcely find a pause long enough in the daily round to think or dream, and into whose lives comparatively so little of the exquisitely beautiful, if we may use the term, ever comes. The closing evening of the Convention, the President's reception at the United States Hotel, was brilliant in the extreme, the handsome drawing rooms flower laden, the beauty of the costumes of the ladies and the kindness of the unwearied greetings of Dr. and Mrs. Wyeth and Dr. Comstock (Chairman of the Reception Committee), made all present feel glad to be there.

The museum of exhibits was also very fine, and the exhibitors vied with one another in courteous attentions to the visiting physicians. At the close of the meeting, as good-bye was said, all through the corridors echoed and re-echoed, "Till we meet again in New Orleans in May, 1903." Nothing succeeds like success, and the enthusiasm of the members carried all present alike in its flowtide of good fellowship, like a leaf on a stream. Never for a moment did the Canadian guest feel himself an alien, nor even a

stranger, and he has carried home a lasting and delightful memory and a big ache in his wrist as a souvenir of the heartily extended glad-hand of his "brother chips," and in his heart old Jack and young Glory float side by side.

W. A. Y.

ANNUAL MEETING OF THE ONTARIO MEDICAL ASSOCIATION.

THE twenty-second annual meeting of the Ontario Medical Association, which was held in the Education Department, Toronto, June 4th and 5th, was in many respects very successful. The attendance, 185 registered members, was small for a Provincial association which has eight hundred members on its roll, and would not have been large if it were the annual meeting of the united Toronto medical associations, for this city boasts of four hundred regular practitioners. Barring a small attendance, the list of shortcomings may be considered as closed. A long array of papers at a medical gathering is not always an unmixed blessing, and listeners are occasionally regaled with lengthy essays, which have a somewhat familiar sound; but an unprejudiced critic could not mete out such a judgment as to the quality of the papers read at this meeting. The exhibition of clinical cases was useful and most instructive. There was little, if any, evidence of experimental research in the papers, the work detailed being of a clinical character, but much of it was worthy of more than ephemeral fame, and deserves a wide circle of readers. It is pleasing to learn from the report of the Committee of Publication that so desirable an end may be looked for. We understand that an effort will be made to publish the annual transactions this year in book form, each member in good standing being entitled to receive a copy. We hope that this project will be realized. The publication of the transactions every year would be gratifying to the readers of papers, useful to members who cannot attend the meeting, and a ready means of placing foreigners in a position to judge of the quality of our medical studies by the tone of the finished product.

The business of the meeting was conducted faultlessly, much credit being due to the President, Dr. N. A. Powell, of Toronto, who, in addition to the possession of a proper sense of the value of minutes, and a correct appreciation of the rights of the assembly

and the privileges of speakers, knows how to season his decisions with a happy blending of good sense and good humor.

The Association was fortunate in having as guests three distinguished American physicians, Dr. Roswell Park, of Buffalo, Dr. Knopf and Dr. A. R. Robinson, of New York, who took part in the proceedings. The luncheon served at the Education Department on the second day of the meeting was quite enjoyable, proving to be an agreeable break in what might have otherwise assumed the aspect of a rather exclusive devotion to scientific work.

We feel satisfied that as long as the Ontario Medical Association continues to put forth efforts as great as those witnessed at the meeting of 1902, there will be small difficulty in securing an efficient membership. On the President-elect, Dr. Mitchell, and his officers will devolve the duty of continuing the good work, and of striving to obtain still higher results at the next meeting.

J. J. C.

DR. STAFFORD'S ARTICLE ON CLIMATOLOGY.

WE have been delighted with the perusal of Dr. Stafford's article, "Experiments in Climatology—The Canadian Summer," which appeared in our May number. This writer's graceful style, and his evident knowledge of the subject of which he treats, make an article on climatology, which is usually arid reading, as grateful as the contemplation of shady groves on a hot day in July.

The editor of the *Journal of the American Medical Association* finds fault with the article, because its author satirizes the heat and discomfort of America, and particularly American cities in midsummer. Dr. Stafford says: "In July the Washington shop-keepers, to attract trade, fry eggs by breaking the shell and allowing the contents to fall upon the heated asphalt of Pennsylvania Avenue." Of course this assertion smacks of the Alphonse Karr type, and may be considered a work of the imagination. It is simply a method of saying that Washington is unbearably hot in summer.

The summer climate of Canada may, without fulsome praise, be considered perfect. Travelled Americans are aware of the advantages obtained by a residence in Canada during summer, both for pleasure and health, and are right glad when the south wind blows steadily to escape from the overheated plains and cities of their own land to our more genial clime.

J. J. C.

EDITORIAL NOTES.

Complementary Office of the Liver.—Gilbert and Carnot, describing in their recently published book, "*Les Fonctions Hepatiques*," the complementary office of the liver in respect to substances derived from the intestine, state that this office applies not only to assimilable alimentary substances, but also to non-assimilable ones as well, which are thus eliminated from the organism. This action of the liver is exercised on foreign bodies of a solid nature, pigments, and micro-organisms, and also on soluble bodies (intestinal poisons, nicotine, etc). Some of these substances, such as iron, mercury, coloring matter, etc., are extracted from the circulating blood stream by the hepatic cells, and afterwards eliminated by the bile. Other substances, solid or in solution, are simply removed from the blood stream and accumulated in the liver. Such are pigments, a great number of bacteria, which are destroyed in the liver, a good many alkaloids (morphine, etc.). Others are changed into harmless products. Such are the products of the disassimilation of the albuminoids, which become changed into urea or the phenols, which are sulpho-conjugated, losing thereby a portion of their toxicity, etc. At the meeting of the Association of American Physicians in April, 1902, J. Adler, of New York, read a paper entitled "Some Effects of Tobacco on the Tissues of Rabbits." His experiments showed that tobacco affects, for a time at least, the fibrous tissues of the liver solely, and that these changes are not complicated by attendant lesions. The paper was discussed by Professor Adami and others, Adami pointing out that in human cirrhosis, at least, the formation of the so-called new bile ducts was from the modified liver cells, and doubting whether the very presence of these, noted by Adler, did not indicate the influence of the tobacco on the cells, as well as on the connective tissues. Adler said that he did not intend to transfer the results of these experiments to human cirrhosis; that proliferation of the bile ducts had occurred in his experimental animals, may or may not be true; but his experiments had shown that there are substances that primarily produce an increase of fibrous tissue solely in the liver, and that these changes are not complicated by attendant lesions. He promised to perform fresh experiments in order to throw further light on the effects of tobacco on the liver.

That in tobacco-users nicotine is eliminated by the biliary ducts seems clear. If, further, it can be shown that the process of eliminating nicotine so disorders the biliary passages as to determine in them a proliferation of fibrous tissue, this datum would assist in proving that the habitual use of "the weed" imposes a rather heavy task on the liver.

Indecent and Immoral Advertisements.—At a recent meeting of the Kansas City Academy of Medicine, a series of resolutions were introduced relating to indecent and immoral advertisements, by a committee composed of Drs. Kyger, Browell, and Zwart, and passed. The resolutions ask for a censorship over the press, and call the attention of the post-office department of the United States to its broken and unenforced laws. We have already alluded in these pages to the matter of indecent advertisements which appear in our daily papers, and we fully sympathize with the efforts of the Kansas City physicians. With the newspapers, commercial advantage is a powerful motive, and many of them do not hesitate to publish the plain enough solicitations of the abortionist. *Ecce signum:*

Cook's Cotton Root Compound

IS successfully used monthly by over 10,000 Ladies. Safe, effectual. Ladies, ask your druggist for **Cook's Cotton Root Compound**. Take no other, as all mixtures, pills and imitations are dangerous. **Price, No. 1,** \$1 per box; **No. 2,** 10 degrees stronger, \$3 per box. No. 1 or 2, mailed on receipt of price and two 3-cent stamps. **The Cook Company,** Windsor, Ont.
4c Nos. 1 and 2 sold and recommended by all responsible Druggists in Canada.

Perhaps the offending newspapers imagine that they are public benefactors, and that they are generously engaged, for a very small consideration, in furnishing timely information on a subject of surpassing interest to women. Until the laws condemning incitements to abortion in Canada are repealed, the postal laws should be enforced against publishers who offend against decency, and assist in the perpetration of abortion, by giving information as to the readiest method of effecting that crime.

The Treatment of Thermic Fever.—At the meeting of the Association of American Physicians, held at Washington, April 29th, 1902, a very instructive paper, entitled "A Report of Cases of Thermic Fever, treated at the Pennsylvania Hospital in the summer of 1901," by Morris J. Lewis and E. A. Packard, of

Philadelphia, was read. Ninety-one cases of thermic fever were admitted to the Pennsylvania Hospital during the first week of July, 1901. The number of negroes was small, showing the comparative immunity of that race. No patient with a temperature below 106 degrees died; no patient with a temperature of 111 degrees F. recovered. Patients who had a temperature of 100 to 102 degrees, 34 in number, were treated by rest, ice-cap, cool bath, aromatic spirit of ammonia, strychnine and alcohol. Those patients who had a temperature of from 102 to 106 degrees, 20 in number, were treated with stimulants, ice-cap, cold bath, or ice rub. Those patients who had a temperature of from 106 to 108 degrees, 15 in number, of whom three died; and those who had a temperature of 108 degrees or over, 22 in number, of whom eight died, were treated by bleeding, salt solution, and ice rub. Bleeding is not advised as a routine measure, but when a falling temperature is not accompanied by improvement in the general symptoms, it should be done. Intravenous injection of normal saline solution is preferred to hypodermoclysis, as it acts more rapidly than the latter, and the solution can be injected through the wound made for bleeding. Ice rubbing, in cases with a very high temperature, is the most efficient means of reducing the fever.

Popular Methods of Arresting Arterial Hemorrhage.—Recognizing the readiness with which hemorrhage from an artery in one of the extremities of the body may be stopped by application of an Esmarch bandage, one wonders why that useful auxiliary is not popularized, especially in places remote from the emergency hospital. Last May a gentleman residing in a country place in Ontario, who had accidentally cut his foot with an axe, died of hemorrhage before surgical aid was available. The wound was inflicted at 10 a.m., and when the surgeon reached the scene of accident at 6 p.m. the same day, the patient was dead. Speaking generally, one would say that, in Canada, where the axe is freely used in felling trees, traumatic hemorrhage is rather common. Could not the teachers in the public schools impart some information to their pupils as to the uses of the Esmarch bandage? Could they not show them how to apply a Spanish windlass? One sees a great deal of reference, nowadays, to manual training in the schools. Gardening is useful, and a proper employment of carpenter's tools may also be helpful to school boys. A practical knowledge of the simplest

method of stopping arterial hemorrhage would be a useful form of manual training, and we commend the subject to the consideration of the school inspectors.

Suprarenal Glands in Malarial Fevers.—Attention has been attracted in France to the employment of suprarenal glands in malarial fevers, and favorable reports have been presented by Drs. Gautier and Buequoy. The latter mentioned a case of chronic malaria, in which quinine had been taken for eighteen months, with the effect of only lengthening the intervals between attacks, and which was cured by the use of suprarenal glands. In tertian fevers, suprarenal glands are administered eighteen hours before the probable time of the attack, on the day of the attack, and the following day. Six days afterwards another dose is given. The results of the treatment are said to be quite remarkable. Dr. Laveran, the French malarial expert, in discussing the use of suprarenal glands in malaria, expressed the opinion that, if a practitioner failed to cure malaria by the use of quinine, taken orally, he should employ the preparation subcutaneously; if he then failed to check the fever, he could use the suprarenal glands. He added that, up to the present time, suprarenal glands had not proved curative in attacks of pernicious malaria, and that, in such cases, he would prefer to use quinine.

The Tuberculising Power of Tubercular Stools.—A report by Drs. Anglade and Choenaux, which was presented to the Society of Biology, Paris, April 19th, 1902, deals with the presence of the bacilli of Koch in the alvine evacuations of tubercular patients. According to the reporters, Koch's bacilli are found in the stools of a tubercular patient, whether the intestine is ulcerated or not, and whether he expectorates or not. Water placed in contact with stools of a tubercular patient, and subsequently injected into a guinea-pig, always gives positive results, even if there is no intestinal ulceration present; hence Koch's bacilli, if swallowed, may pass through the intestine without parting with their virulence. The virulence persists in such water, even when exposed to the air, and cooled down to 14 deg. F. Hence it is reasonable to conclude that the stools of tubercular patients should be treated with disinfectants. More particularly is this true in cities, in which the water supply may be contaminated with fecal excreta.

❁ *Items of Interest.* ❁

Professor Ehrbach.—It is said that Emperor William has commissioned Professor Ehrbach, the well-known bacteriologist and physiological chemist, of Frankfort-on-Main, to devote himself henceforth exclusively to the study of cancer.

Attention, Physicians.—We desire to correspond with physicians who desire good locations for the practice of medicine in the United States. Full information of excellent locations given free.—INDEPENDENT BUSINESS BUREAU, Waterloo, Iowa.

Wm. Wood & Co.'s New Catalogue of Medical Publications.—We received a week or two ago the new Catalogue of Medical Publications, as gotten out by the firm of Wm. Wood & Co., of New York City. It is certainly a very handsome pamphlet, and is illustrated with half-tones of many of the authors, whose books are referred to. The catalogue is printed on a splendid quality of paper, and is not one of the kind which is frequently apt to be tossed in W. P. B., but, on the other hand, retained for reference.

Drug Store Manager Suffers for Giving Substitute to Customer.—In Special Sessions on May 22nd, before Justices Wyatt, McKean and Hinsdale, Clarence D. Bowman, a director of the Lewis A. Bates Company, and the manager of their drug store in No. 739 Sixth Avenue, pleaded guilty to having violated Section No. 364 of the Penal Code, in using another preparation in place of essence of pepsin, manufactured by Fairchild Brothers & Foster, in filling prescriptions calling for the latter preparation. He was fined \$50. It appeared that on several occasions, when physicians had prescribed Fairchild's pepsin, Bowman had delivered the imitation mixture. Bowman said he was sorry for what he had done, but had no excuse to offer. In imposing sentence, Justice Wyatt said that the offence was a most serious one, and that a heavier penalty would have been imposed had not the injured firm recommended leniency by reason of its being the defendant's first conviction.—*New York Press.*

Canadian Branch for the Borden Condensed Milk Co., of New York.—Borden's Condensed Milk Company now have a factory in Canada for the manufacture of their celebrated Eagle Brand and Peerless Brand of Evaporated Cream. This will permit a lower cost price to the dealer, and will consequently make quite a difference to the consumer. Heretofore the high duty on Condensed Milk imported into Canada has made it necessary for

the dealer to charge a considerably higher price for the Borden Brands than is charged in the States. Realizing the trade in Canada was practically prohibited from buying the Eagle Brand owing to the high price, caused by the duties charged, the Borden Company decided that it would be necessary to operate a plant in Ontario in order to put them in position to sell its brands at a fair price. It is not necessary for us to lay any stress on the fact that the usual quality will be maintained, as it is against the principle of the Borden Company to deviate in the least from the Standard quality of its brands. This Company originated condensed milk, and has been established over forty-five years. Their Peerless Brand Evaporated Cream is one of the largest sellers.

Local Treatment of Leucorrhea and Gonorrheal Vaginitis.—

The following is recommended as a specific for persistent vaginal discharges (especially old standing cases), by Dr. Chapelle, of Paris, and has proved almost universally successful, and is now used to destroy by phagocytosis pathogenic germs which invade the vagina:

R Cerevisine (saccharomyces cerevisæ)	3 ounces.
Glycerine of starch (cold).....	2 "

Make into a paste.

A portion of the paste made up in a ball about the size of a walnut, should be placed in the vagina, well up against the cervix, and retained in position by a tampon of absorbent cotton. The treatment is perfectly harmless, and if persisted in for a week or ten days, will give marked beneficial results, which will be maintained, especially if the patient is sustained by liberal diet and tonics, such as phospho-glycerate of lime wine. Cerevisine is a pure form of the yeast plant, desiccated at a low temperature.

The G. Cramer Co.'s New Catalogue.—There has just appeared the sixth edition of the G. Cramer Dry Plate Co.'s Catalogue. It is full of interest, and contains a full description of the various brands of plates manufactured by that well-known firm, as also the most recent formulæ for working the same, all of which have been carefully tested beforehand. It would not be easy to enumerate the many plates made by The Cramer Co., but one will interest medical men perhaps more than some of the others. We refer to the Cramer X-ray plates. They are made expressly for X-ray work, and are used by the most prominent experts throughout the United States and Canada. These plates are reliable, uniform in results, and easy to manipulate. The same developer and fixing bath used for the Banner or Crown plates can also be used, but on account of their extreme sensitiveness, great caution must be exercised while handling and developing, by not exposing more than is actually necessary. The firm have discontinued packing these

plates in the paper envelopes, as the contact of paper affects the sensitized surface and materially injures their keeping qualities. They therefore furnish the envelopes separately, into which the plates can be readily inserted as required for use. Any physician interested in this work will be well repaid by sending for a copy of this catalogue.

Monument to the Late Dr. Thos. Dunn English, Author of "Ben Bolt."—A committee have been appointed by the Board of Managers of the Society of American authors to solicit subscriptions for the erection of a suitable monument over the grave of Dr. Thomas Dunn English, editor, lawyer, soldier, physician, statesman, author, and long-honored Vice-President of the Society of American Authors. Gifts for this tribute to the illustrious author of "Ben Bolt" will be welcome in any amount, large or small. The receipts will determine the character and stateliness of the monument. Names of the donors will be imperishably preserved on brass sheets in the monument. If, after the completion of the work, there should be any surplus funds, they will be turned over to the family of Dr. English. Checks or money orders should be drawn in favor of Morris P. Ferris, Treasurer, and should be addressed: "Thomas Dunn English Memorial, Society of American Authors, 32 Broadway, New York." An itemized report of the receipt and distribution of all funds received by the Committee will be mailed to all contributors.

The American Roentgen Ray Society.—The American Roentgen Ray Society desires to announce that its next meeting will be held in the city of Chicago on December 10 and 11 of the current year. There has been secured a most excellent local committee of arrangements, composed of well-known and leading men of Chicago, under the chairmanship of Dr. Ralph R. Campbell. This committee further embraces the names of Drs. John B. Murphy, Louis E. Schmidt, M. L. Harris, W. L. Baum, H. G. Anthony, and W. A. Pusey. The personnel of this committee gives evidence of the earnest desire of the Society to have its meetings entirely ethical and scientific. The very nature and mystery of the X-ray, and the tremendous impetus in a therapeutic way which has been given to its use during the past year, will unquestionably encourage a very widespread abuse on the part of many irresponsible persons. It is the hope of this Society to serve a useful purpose in encouraging on the one hand a proper understanding of the uses and limitations of the X-ray, and on the other hand to limit and control the inevitable abuses which are now springing up on all hands. It is hoped that all those who feel an interest in the uses to which the wonderful discovery of Professor Roentgen may be put, will bear the date of this next meeting in mind and communicate with the local committee of arrangements, or with the Secretary of the Society, James B. Bullitt.

The Physician's Library.

BOOK REVIEWS.

The History of Medicine in the United States. A Collection of Facts and Documents relating to the History of Medical Science in this Country from the earliest English Colonization to the year 1800. By FRANCIS R. PACKARD, M.D. 8vo. 542 pages. Philadelphia: J. B. Lippincott Co. Canadian Agent: C. Roberts, 1524 Ontario Street, Montreal, P.Q.

This work is a biographical miscellany of high literary value; and reviews the personnel of the medical profession in America during the colonial period. The pages abound in quaint details and memoranda, and as a piece of scholarly writing the book forms a companion volume to Dr. Canniff's work on the Medical Profession in Upper Canada; more accurately so named, by the way, than the present work, which can hardly be said to form a very important part of the history of a science in the development of which the United States has had no more important a share than Canada.

Beginning with the first barber surgeons, who had a tendency to become discontented with the amount of their hire, which was twenty pounds a year, and to find the dulness of colonial life distasteful and to want to return home to England, the author follows the profession down to the close of the eighteenth century, when there were still no street cars, and it was very inconvenient, it would seem, for the physicians to get about, owing to the bad roads and that like.

While Stahl, Beccher and Priestly were making original investigations in chemistry, the professor of that subject at Harvard was illustrating the share of the New World in the development of that branch. "This experiment is of remarkable brilliance," he said. "I touch this powder with this fluid, and it bursts into flame. Gentlemen, the experiment has failed," the Professor remarked, after waiting a reasonable time for the flame to appear; "but the principle, gentlemen, the principle remains firm as the everlasting hills." This anecdote will indicate the actual part played by America in the "History of Medicine."

A supplemental chapter on the "Discovery of Anesthesia" revives again that most discreditable controversy. It would have been more felicitous if the time limitation had been broken instead to include Dr. Beaumont's experiments, which were more in the spirit of Laennec and Jenner than the unspeakable vulgarity which from first to last characterized Morton's conduct. The author,

however, withholds the honor from the dentists, Wells, Riggs, and Morton, in favor of Long of Georgia.

"In my opinion," he says, "the credit of first using ether as an anesthetic is due to Crawford W. Long, and the credit of demonstrating its value and use to the medical profession and the world must be ascribed to W. T. G. Morton."

This is eminently just. But Long's prior use was in 1842. The honor of "first demonstrating the use" of an anesthetic, therefore, reverts to Sir Humphrey Davy. Sir Humphrey Davy was the real discoverer and demonstrator of its use; and it is preposterous that the claims of the persons mentioned should have received so much attention. In his *Researches, Chemical and Philosophical, Chiefly Concerning Nitrous Oxide*, published in 1800, Sir Humphrey Davy plainly remarks: "As Nitrous Oxide, in its extensive operations, appears capable of destroying physical pain, it may probably be used with advantage during surgical operations in which no great effusion of blood takes place." (Jones' Investigations on Hemorrhage were not published till 1805.) Indeed, while the dentists in their "parlors" were jubilantly advertising their "new era in tooth-pulling," Dr. Chas. T. Jackson, the only person, it would appear, of education or breeding connected with the controversy, stated that "the fact had been known to the scientific world for years."

This was true. It is therefore exceedingly unfortunate that this plebeian exhibition of mercenary ignorance, which did not originate "in the scientific world" at all, but among the unlearned and unscrupulous, should not be allowed to fall into deserved oblivion. It was Sir Humphrey Davy who first suggested anesthesia, and Dr. J. C. Warren, of the Massachusetts General Hospital, was the first reputable surgeon to employ it. To Sir Humphrey Davy and to Dr. Warren the divided honor (if it must be divided) undoubtedly belongs.

E. H. S.

Handbuch der Physikalischen Therapie. Herausgegeben von Dr. A. GOLDSCHIEDER, a. o. Prof. in Berlin; und Dr. PAUL JACOB, Priv.-Doc. in Berlin. Leipzig: Verlag von Georg Thieme. 1901.

During the last decade medical science has made much progress in the direction of employing natural methods of cure, that is, physiological as distinct from methods dependent upon the employment of drugs. There can be no reasonable doubt that the change marks a real advance. The more important place given to fresh air, sunshine, rest, sleep, diet, bathing and exercise, does away in some measure with the opprobrium of empiricism with which the profession has been charged. Not the members of the profession alone are the gainers, but their patients also.

Enumeration alone of the subjects discussed in this valuable work by Dr. A. Goldscheider and Dr. Jacob, both of whom are

teachers in Berlin, would suffice to show the extensive range of therapeutic agencies which may be employed without entering the domain of the pharmacist.

As would be expected from the names of Rubner, Nothnagel, Eichhorst, du Bois-Reymond, and Leibig, who write the chapters on Climatology, they are among the best not only in this work, but to be found anywhere. While a concise but interesting account of the merits of high altitudes in Europe is given, there is a notable lack of reference to those of America.

The chapters on Sea Influences and on Hydrotherapeutics by Hiller and Wiernitz are highly instructive in their explanations of the physiological action of water as employed to influence and stimulate bodily functions.

Goldscheider's chapter on Thermoherapeutics is concise—too concise—but is a valuable chapter.

The wide range of the discussion of gymnastics is seen in the fact that not only is full justice done to formal gymnastics, but an interesting account is given of riding, wheeling, swimming, snow-shoeing, etc.

While the principles which govern the use of mechanical appliances in the treatment of orthopedic cases are concisely set forth, yet it is not a satisfactory discussion of this subject. A limit of twenty-four pages and a sparseness of illustration render it impossible to do justice to the subject.

The chapters on Electricity and Light as therapeutic agents, by Ludwig Mann, Bernhardt, and Rieder, bring to a close a most valuable work.

B. E. M.

A Manual of Surgical Treatment. By W. WATSON CHEYNE, C.B., M.B., F.R.C.S., F.R.S., Prof. of Surgery in King's College, London; Surgeon to King's College Hospital and the Children's Hospital, Paddington Green, etc.; and F. F. BURGHARD, M.D. and M.S. (Lond.), F.R.C.S., Teacher of Practical Surgery in King's College, London; Surgeon to King's College Hospital, the Children's Hospital, Paddington Green, etc. In six parts. Part VI., Sec. 1: The Treatment of the Surgical Affections of the Tongue and Floor of the Mouth, the Pharynx, Neck, Esophagus, Stomach and Intestines. London and Bombay: Longmans, Green & Co., 79 Paternoster Row. Canadian Agents: J. A. Carveth & Co., Toronto, Ont. Price of this volume, \$4.50. 1902.

This volume covers very fully the surgical treatment of injuries and diseases of the Neck, Mouth, Tongue, Throat, Esophagus, Stomach and Intestines. The work is uniformly good throughout, making it impossible for us to refer especially to any one chapter. We would, however, note a preference given in retropharyngeal abscess to opening through the upper part of the posterior triangle of the neck, instead of through the interior triangle of the mouth. Tubercular glands of the neck are treated in a conservative manner,

and removed only when hygienic and medicinal treatment have failed, and enlargement or softening is taking place. The treatment of affections of the stomach and intestines, including hernia, takes up 278 of the 470 pages, and is the most concise and complete work it has been our pleasure to review. W. J. W.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat and other topics of interest to Students and Practitioners. By leading members of the Medical Profession throughout the world. Edited by HENRY W. CATTELL, A.M., M.D., Philadelphia, U.S.A. Volume I. Twelfth Series, 1902. Philadelphia: J. B. Lippincott Company. 1902.

This volume, the first of a new series, has many things about it to recommend it to the notice of the general practitioner. It is well gotten up, the type, paper, and binding being not only of an attractive character, but in every way arranged so as to make the book easy and interesting to read. Some of the illustrations are exceedingly good, and the articles of value, and not long enough to be wearisome. The first half-dozen pages are devoted to "Biographical Sketches of Eminent Living Physicians," the two described in the volume being S. Weir Mitchell, M.D., LL.D., and John A. Wyeth, M.D., LL.D. Besides the leading articles, forty pages are devoted to "General Surgical Subjects," in which extracts are given from a number of journals. Space is also devoted to general surgical subjects, new instruments, devices, etc. Of the contributors, one is German, one Canadian, two Parisian, two Scotch, and fourteen American, more than half of whom belong to Pennsylvania.

The Practitioners' Hand-Book of Diseases of the Ear and Nasopharynx. By H. McNAUGHTON JONES, M.D. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden. 1902. 10s. 6d.

The first edition of this manual appeared in 1878. When one has devoted thirty-four years of one's life to otology, as has McNaughton Jones, one is not very likely to develop an excess of surgical zeal, one's operative enthusiasm is chastened by a recollection of highly vaunted methods which have proven but a delusion and a snare. The opinions of such a man are invaluable.

The greatest advance in modern otology certainly is the recognition of the morbid conditions of the middle ear, which threaten life by extension to the brain and its coverings. The surgical methods by which such extension may be prevented and combated are of the greatest interest to every practitioner. The portion of the book dealing with this subject is written by William Milligan, of Manchester, who gives a very lucid account of the various radi-

cal operations on the mastoid. Some day the general practitioner will recognize that an exploratory opening of the mastoid process is even more justifiable than exploratory abdominal incision. Herbert Tilley, of the Golden Square Throat Hospital, contributes the article on the affections of the nose and its accessory cavities, which may affect the ear. To Professor Birmingham and Dr. Joyce has been given the anatomy of the ear. The book is well bound, well printed, well illustrated, up-to-date, and yet not too much so—progressive, yet moderate. J. M.

A Manual of Practical Anatomy. By the late PROF. ALFRED W. HUGHES, M.B., M.C. (Edin.), F.R.C.S. (Edin.), F.R.C.S. (Eng.), Professor of Anatomy, King's College, London, etc. Edited and completed by ARTHUR KEITH, M.D. (Aberd.), F.R.C.S. (Eng.), Lecturer on Anatomy, London Hospital Medical College. In three parts. Part II., the Abdomen and Thorax; illustrated by four colored plates and 15 figures in the text. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1902. Canadian Agents: Chandler & Massey Limited, Toronto and Montreal.

Part II. of this excellent work, which we have had the opportunity of referring to in a previous issue, is devoted to the Abdomen and Thorax. It is well illustrated, and a great deal of credit is due to the publishers for the excellence of this feature of the book. The illustrations are, without exception, splendidly executed, those that are colored being not only beautiful, but convey at once to the mind a very correct idea of the part of the human frame being studied. It would be a difficult task to single out any chapter better than another, the entire volume being full of matter which, perhaps, especially to the surgeon, will be found most useful, and worth a great deal more than the price charged for the book, viz., \$3.00.

Les Fonctions Hepatiques. Par MM. A. GILBERT, Professeur a la Faculte, et P. CARNOT, Docteur es-Sciences, Membres de la Societe de Biologie. I. vol., in-12 de 287 pages. Cartonne a l'anglaise. Paris: C. Naud, 3, rue Racine. Prix, 5 francs.

A fact driven home to a physician who reads this book is that instruction in physiology should be given in a laboratory, and if possible by teachers of the same capacity as MM. Gilbert and Carnot. Scraps of physiology caught up at lectures or picked out of books furnish an insufficient basis from which the physician can elaborate a suitable knowledge of the institutes of medicine. May the medical students of the future receive better drilling in the science of the hepatic functions than their predecessors. In presenting to the reader this record of their original investigations, which are considerable, the authors render justice, as the subject required, to the past labors of other workers in the same field of experimental physiology. The book is written in a happy, lucid style, and is deserving of a large sale. J. J. C.

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF
MEDICINE AND SURGERY

VOL. XII.

TORONTO, AUGUST, 1902.

NO. 2.

Original Contributions.

RECENT SCIENTIFIC STUDIES REGARDING THE ETIOLOGY AND TREATMENT OF CONSUMPTION.*

BY L. H. WARNER, A.M., Ph.G., M.D., NEW YORK.

*Mr. President, Members of the Congress of Tuberculosis, Ladies
and Gentlemen:*

It is indeed a pleasure and privilege to address this august body on the subject of Tuberculosis, knowing full well that this Association stands in the foremost ranks of the various other professional societies, whose work is devoted to reaching for advanced knowledge with which to combat the dreaded disease, Tuberculosis, better known as the White Plague.

To aid in the efforts of this Association, and to, if possible, benefit all mankind, it seems of the utmost importance to me that those who appear before this august body to recite their various experimentations, or to report their clinical data, should not be led by an individual observation based upon a probable false teaching (for it is a well-known fact that the entire history of tuberculosis has primarily dwelt upon misconceived facts, until suddenly the star of hope arose and with it all previous conclusions and deductions were proven to be naught). I therefore deem it advisable to take up the subject of tuberculosis, citing first its general history, beginning as far as five hundred years before the Christian era, following it up with the advanced knowledge which we derived through the indefatigable work of the scientist in the various branches of scientific medicine—namely, microscopy, biology, pathology, bacteriology, and hematology.

* Read before American Congress of Tuberculosis, held at Majestic Hotel, New York, June 3rd, 1902.

I have enumerated these different branches of scientific medicine in the order heretofore mentioned, as past history (referring especially to tuberculosis) proves to us that the first erroneous conception of tuberculosis was disproven through biological experiments. The biologist at this time stood single-handed, fighting an army of men whose narrow-mindedness baffled and contradicted all of his ideas and thoughts, but he laid the foundation which coerced the pathologist to take up the thread thus laid down; and the latter, like many of his co-workers who devote their time and attention, and in many instances sacrifice their lives for the sake of science, received no remuneration for his work; on the contrary, the verdict of an ungrateful profession and public made light of his extensive labor.

Still, we know there were scientists who were not disheartened by the discredit thrown upon their arduous work, and we subsequently find the appearance of the bacteriologist. From this date, as you will later hear, we received our first positive information regarding bacteria life and that dreaded disease, tuberculosis. Although this occurred in the year 1882, we have now several other branches of scientific medicine to which you must listen, if you desire to keep trend with the rapid progress that is being made in the department of medicine through scientific research work.

I now refer to the hematologist, and only wish that there were more workers who could afford, or would have the will-power to throw aside all considerations of pecuniary benefit, and give their entire time and attention to the study of cell life; and this refers especially to the millions and millions of cells which comprise the blood in its entirety.

After dwelling upon this part, I shall conclude my paper by giving special attention to the etiology of tuberculosis as it is now understood, to the prophylaxis and treatment, which, according to my opinion, are based upon research work on the lines of biology, pathology, bacteriology, hematology, and clinical work, to all of which I would invite your kind indulgence.

From the time of the microscopical studies of Lebert and Reinhardt dates the clear fact that the key to all problems is to be looked for in histological research; and following these advices, we have Virchow, who inaugurated a new era in the history of pathology, when he pronounced that all functions of the body in health and disease are but the manifestations of either the activity or dormancy of cell life.

Tuberculosis, with its large mortality, was first observed five centuries before the Christian era; and in fact was at that time known under the name of phthisis, which latter term was accepted for all disorders which brought on wasting of body substances. In later years the term *phthisis* was confined to cachectic disturbances of the respiratory system, although the credit for first calling

our attention to the specific pathogenic bacterium, the tubercle bacillus, belongs to the great savant, Koch.

We find that Hippocrates, and subsequently Aretaeus, gave thorough descriptions of phthisis, then known as phthiae, and they were the first to describe this disease as a special pathological manifestation. The pathological study of tuberculosis did not begin until 1653, when Forrester published his work, "*Observationum et Curationum Opera Omnia*." But even this stride in advance led to corroborative evidence only after *post-mortem* findings.

I have already referred to the master-work of Virchow, who was aided in his researches by Klebs, who reported in 1877 that the inoculation of animals with cultures from tuberculous products upon the white of eggs, produced lesions similar to those following the direct injection of tuberculous tissues themselves.

The findings of Klebs, I believe, led to the discovery of the tubercle bacillus by Koch, who reported his findings before the Physiological Society in Berlin, in March, 1882.

I now desire to call your attention to the fact that not all cases of tuberculosis can be positively diagnosed by the findings of the tubercle bacillus in the sputum; and again, the non-finding of the tubercle bacillus in the sputum of emaciated patients does not always prove that there is no tubercular infection present. Of this, more later on.

I now approach upon the sphere of the biology of tuberculosis. Hammerschlag, according to statistics, is the first who made investigations of the products of elimination in tubercular cases. He noted that the tubercle bacillus, if immersed in alcohol or ether, or both in equal proportion, lose as much as 27 per cent. of their weight—a loss three times greater than that of any other bacteria under similar treatment.

I beg to impress upon you the value of the statement coming from so eminent an authority as Hammerschlag, for in the latter part of my paper appertaining to the suggestive treatment in tuberculosis, I give you data which may be worth while your due consideration and thought, and which may in a slight way aid in the cure and probable eradication of tuberculosis.

The extractives obtained by Hammerschlag resulted in finding fatty substances (lecithin and some toxic substances) which, when injected into animals, caused convulsions. The parts insoluble in alcohol and ether proved to be albuminous substances containing cellulose. He subsequently proved that the fatty substances amounted to one-third of the total substance, and consisted of palmitic, arachidic and some undetermined volatile acid.

The main lesson to be learned from this report is the proof that the tubercle bacillus possesses tryptic faculties which enable it to act upon albuminous substances forming peptones and tryptophans.

Again, at this time I have to deviate from the subject of biology and call your attention to the investigation of Metchnikoff, who was the first to teach us the presence of phagocytosis. This subject I will explain under the heading of hematology.

Under the heading of biology we have to consider the subject of tuberculin, which Koch brought to our attention in 1890. On August 4th, 1890, Koch announced that he had found a substance which immunized animals against tuberculosis; and in 1891 he published a formula of his tuberculin. His opinions were based on the findings that when he injected tuberculous substances into an already tubercular infected animal, he produced a tubercular ulcer which subsequently healed, a condition he could not produce when he injected dead bacilli into healthy animals. Hence he extracted the soluble products of the tubercle bacillus and named the end product tuberculin.

History points to the fact that upon this announcement by Koch, the most eminent medical men from all parts of the world flocked to Berlin to get possession of the newly-discovered specific. It seems to me irrational for the narrow-minded to discredit the work of Koch in this direction; his work was mostly theoretic, it being based upon no other ground than that tuberculin might prove a cure for consumption, this in view of his previous biological tests. Time has already decided that tuberculin has its especial uses. These reports and findings of Koch opened avenues for research work resulting later in the discovery and successful application of various antitoxines. No one will deny that Koch's original work led to the discovery of antitoxin diphtheria, and health statistics tell how much this product has decreased the mortality in diphtheria.

Our next step regarding biologic research is when we find that tests have proven that whenever and wherever concurrent infection of other pathogenic bacteria exists, then cavities are rapidly formed. The bacteria which we find in mixed infections are the streptococcus, staphylococcus, diplococcus, lanceolatus; and the Friedlander bacillus; also the colon bacillus.

Dr. Sewell, of Denver, who reports that, after studying the sputum of more than seventy tubercular patients, having in view the relation of the form of tubercle bacillus to the clinical aspects of tuberculosis, the form of the bacillus found has a definite relation to the virulence of the disease. He finds that the short double staining rod or chain of rods of moderate length is the usual form of bacillus found in most cases. The long rods, particularly if irregularly broken, denote a mild process, while a long, slender rod, ill-stained or stained irregularly, is found in cases apparently passing on to a cure. Dr. Sewell has noted that the sputa of the same patient, examined at different times, seemed to vary in the bacillary character according to the clinical condition of the pa-

tient. A thorough study of the morphology of the tubercle bacilli will lead to a true statement of facts.

I believe the finding of Dr. Sewell to be of the utmost importance. My observations have been on the same lines, and I believe that during the examination of the sputa special attention should be given to the morphology of the bacteria, as this becomes necessary to enable us to obtain a proper and accurate line as to a probable prognosis. All this demonstrates the fact that the greatest necessity in all suspected or infected cases lies in bacteriological work.

The foregoing has, to a certain extent, covered the departments of biology, pathology, and bacteriology, and I now beg to call your attention to what appears to me the most essential part—not alone regarding the diagnosis, but also to a probable prognosis in all tubercular conditions, and that is the study of the blood.

The study and proper knowledge of the blood, like the study and knowledge of tuberculosis, are in their infancy. But in truth, better advances have been made in the study of hematology than in that of infectious diseases. Dealing with the blood in its entirety, we deal with an innumerable number of cells, each and every one performing its specific function. When we consider the red cells whose function it is to resorb the oxygen and distribute the same throughout the organism; or, whether we consider the white corpuscles or leucocytes, whose function it is to convert our ingesta into tissue pabulum, to be distributed as food to the various cells and tissues of the body, or to perform the function of phagocytosis, that is, of attacking, devouring or converting foreign substances (toxins or tox-albumens) which may have found their way into the blood circulation, where they might produce auto-intoxication, we must note that cell life does not exist without a nucleus. The beginning of life is the meeting of two nuclei which, through the processes of karyokinesis, multiply themselves and propagate life.

This, in fact, is one of the processes of metabolism, and the definition of metabolism is confined to the proper nourishment of all cells and tissues within organic life, be it vegetable or animal. Whenever this function is properly performed, pathological conditions become outcast, and it is our first duty to thoroughly understand and study this phenomenon. In the branches of physiology, or better, physiological chemistry, attempts have been often made to isolate the substance upon which these cells depend for their functional activity, only to find that in our endeavors we have combated inorganic and organic elements, resulting in the destruction or the splitting of one or more products.

We must draw a strict differentiation between the science of chemistry and physiological chemistry, and only at the advent of the latter science have we learned that the ingredients of the

nucleus of each and every cell in animal or vegetable life consists of a highly organic product, better known as nuclein. Attempt upon attempt has been made to isolate this product, but failures have invariably followed, resulting in placing before the practitioner bi-products of nuclein known as Lethitin, Phosphoric Acid, Protargon, etc.

I now recall to you the statement made in the introductory, when I cited to you the findings of Hammerschlag's laboratory experiments, and the subsequent clinical investigations in hospitals and clinics, or at the bedside of the patient, which demonstrated that even the bi-products of nuclein exert a specific physiological action upon the blood. No matter what medication we resorted to, its physiological action is first noted by the histological changes which occur in the different varieties of blood cells, and knowing full well that life depends upon the proper function of the blood, we must at once recognize that medication administered in disease (and I desire to make it a special point), when administered in tuberculosis, must primarily exhibit its physiological action by demonstrating progressive histological changes in the blood.

Whenever and wherever disease exists, we find our patient exhibiting an anemia of more or less degree; and the term "anemia" comprises impoverishment in the color substances of the blood—better known as hemoglobin and the reduction of the number of red cells.

Should such anemia be accompanied by an infection of any kind, then we have the exhibition of a leucocytosis. It is not of such great value to know the amount of hemoglobin, or the number of red and white cells, in the blood of your patient, but the greatest and most important point—in fact, the only important one to be considered—is the study of the histological structure of the leucocytes, and a thorough and accurate count of the varieties of leucocytes, and when making such, to consider the functions of the hematopoietic organs.

A thorough study of pathological anatomy, especially when undertaken in *post-mortem* cases, will show us either the dormancy or activity of certain hematopoietic organs in tuberculosis.

It has been my observation, as well as that of some of the greatest scientists, that a specific blood cell occurs in the blood of tubercular patients—namely, the basophilic cell, which, if found, tends toward a favorable prognosis.

An abnormal count of polynuclear leucocytes, especially if accompanied by neutrophilic granules, denotes a very unfavorable prognosis; and if such leucocytes are exhibited in the blood in abnormal quantities, then we will also find that all eliminations contain an excess of phosphates or phospho-albuminates.

The question now arises, Whence such excessive elimination of phosphatic elements?

I have called your attention to the properties of the organic element, nuclein, which is held within the nucleus of every cell, and it is of the utmost importance that you understand that the appearance of aged leucocytes, better known as polynuclear leucocytes, causes a disintegration of the nucleus; and the nuclein thus set free by passing through the channels of elimination, is eliminated as bi-products of nuclein in the form of earthy phosphates, triple phosphates, or nucleo-albumen.

With this fact before us, we have a thorough demonstration of the necessity of first examining the blood of our patient chemically

Disease.		Blood Examination.		PHOSPHATES						Medication.	
		Red Cells.	White Cells	Defect of		Excess of					
				2%	1%	1%	2%	3%	4%	5%	
Case 1322	FIRST TEST	—	—								Ol. Morphine & Creosote
	SECOND "	—	—								Tr. Amal. 32 f. d.
Tuberculosis pulman.	THIRD "	3,200,000	9,100								
	FOURTH "	3,200,000	9,400								
	FIFTH "	3,200,000	9,600								
	SIXTH "	3,700,000	9,300								32 every 4 hours
Case 1307	FIRST TEST	—	—								Mist. Creosote Co.
	SECOND "	—	—								Tr. Amal. 32 f. d.
Tuberculosis pulman.	THIRD "	3,100,000	10,600								
	FOURTH "	3,350,000	10,200								
	FIFTH "	3,520,000	9,600								
	SIXTH "	3,400,000	9,100								32 every 4 hours
Case 1303	FIRST TEST	—	—								Mist. Creosote Co.
	SECOND "	—	—								Tr. Amal. 32 f. d.
Tuberculosis pulman.	THIRD "	3,000,000	12,500								
	FOURTH "	3,410,000	8,200								
	FIFTH "	3,870,000	9,300								
	SIXTH "	3,940,000	9,100								32 every 4 hours
Case 13076	FIRST TEST	—	—								Ol. Morphine & Hypophosph.
	SECOND "	—	—								Tr. Amal. 32 f. d.
Tuberculosis pulman.	THIRD "	3,710,000	19,100								
	FOURTH "	3,720,000	9,200								
	FIFTH "	3,940,000	9,600								
	SIXTH "	4,000,000	9,400								32 every 4 hours
Case 12 D.	FIRST TEST	—	—								Mist. Amm. Carb. & Bellad.
	SECOND "	—	—								Tr. Amal. 32 every 4 hours
Pneumonia	THIRD "	4,100,000	16,400								
	FOURTH "	4,210,000	9,000								
	FIFTH "	4,510,000	8,400								
	SIXTH "										discharged.
Case 4 D.	FIRST TEST	—	—								Mist. Expect. & Bellad.
	SECOND "	—	—								Tr. Amal. 32 every 4 hours
Bronchitis	THIRD "	3,800,000	8,500								
	FOURTH "	3,830,000	8,500								
	FIFTH "	3,940,000	8,700								
	SIXTH "	3,940,000	8,800								32

and pathologically, using the indications derived therefrom as a comparative medium towards actual existing conditions within the blood as a whole, and subsequently in the tissues. The time is past when the physician should practise according to theorism, for rationalism based upon scientific facts may give a true explanation as to the treatment of tuberculosis, and I beg to say, that in my opinion, the clinical or physical examination of a tubercular patient appears of no value excepting when corroborated proof is given by a pathological examination of the fluids traversing the body.

Disease would be unknown to us if each and every one of us—not alone the profession, but also the laity—would understand that the principle of good health depends upon perfect metabolism; and the subject of metabolism not alone includes the knowledge of proper hygiene and dietetics, but also teaches us pre-eminently the proper steps of prophylaxis.

One of the first steps towards perfect metabolism appears to be potent and prompt purgation; strict regard for the activity of all eliminative organs; intellectual understanding and attention to nutritive demands; control of body temperature—that is to say, the proper understanding and differentiation between thermolysis, thermogenesis, and thermotaxis.

Where in the world will we look for an explanation of these physiological phenomena, excepting in the blood? The force or depression in the circulation of the blood to certain vital parts of the organism increases or decreases temperature, and the ancient teaching of medicine has invariably led to deleterious consequences when, through faulty teaching, various coal-tar products, antipyretics, etc., had been administered to a patient owing to a rise of temperature. It is due to the elevations of the body's temperature so characteristic in pulmonary tuberculosis, that headache is not an infrequent symptom of phthisical patients. As a rule we have resorted to remedies which exerted a weakening action upon the heart and circulation, hence causing a depressing effect upon the vasomotor centres.

Little, if any, attention, did we give to the physiological properties of these products regarding their diuretic value. It is my opinion, based upon years of research work, that these vaso-motor disturbances are not of a real character, but rather traumatic. Hence, we find that coal-tar derivatives are never to be employed in tubercular conditions, no matter how high a temperature we might note.

More or less, these neuroses are due to the digestive disturbances; and again, the effect of such digestive disturbances may be noted and demonstrated through the examination of the blood, which will exhibit a profound digestive leucocytosis.

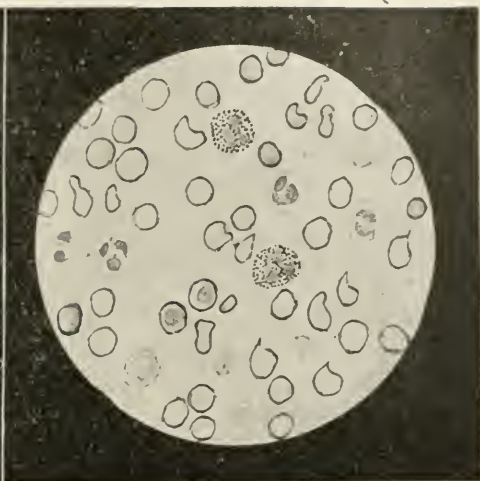
Returning to the features of metabolism, it is my belief that one of the principal factors to produce perfect metabolism in cases where it has been disturbed, is explained in the words of Sancho Panza, who states: "Blessed be the man who invented sleep."

I do not wish to convey the idea that in order to obtain sleep, hypnotics should be resorted to. The best hypnotic we know of is one of self-coercion—that is to say, when the tissues have performed a certain amount of function, they convey to the entire system a want of sleep. This expression exhibits itself in the normal organism throughout the entire cerebro-spinal column, and



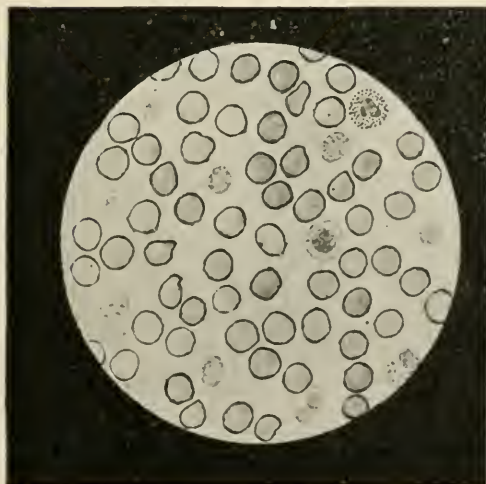
CASE 1,302.

Hemoglobin, 53 per cent.	
Red cells.....	3,905,000
White cells.....	9,100



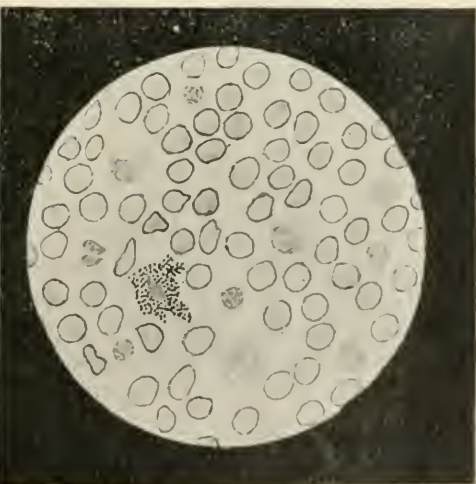
CASE 1,307.

Hemoglobin, 51 per cent.	
Red cells.....	3,100,000
White cells.....	10,600



CASE 1, 02.

Hemoglobin, 82 per cent.	
Red cells.....	3,700,000
White cells.....	9,300



CASE 1,307.

Hemoglobin, 74 per cent.	
Red cells.....	3,400,000
White cells.....	9,100

subsequently through all the nervous tract deriving its nourishment therefrom.

I have repeatedly noted that iodide of potassium has been used for the purpose of reaching a diagnosis of pulmonary tuberculosis and subsequently as an alterant in medication; and both, in my opinion, have shown me that we still believe in the imagination of the ancient physicians.

It is my belief that more harm can be done through the administration of iodide of potassium in the treatment of tuberculosis than through any other drug known to us in our *Materia Medica*.

This statement does not concern all iodide salts; on the contrary, I have noted excellent results after the employment of iodide of lime (Nichols) in cases of tubercular glands, syphiloma, etc.

I must corroborate and fully endorse the statement of one of our noblest workers for the cause of tuberculosis, Dr. S. A. Knopf, of New York City, who, I believe, took the right steps towards the eradication of tuberculosis when he presented before the New York Academy of Medicine in 1902 a resolution trying to overcome thereby the prevailing ambition of certain societies or communities to class tuberculosis as a contagious disease, and to force the isolation of tubercular patients.

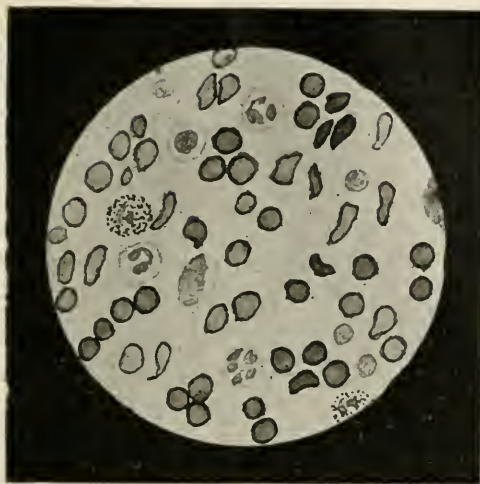
Like Dr. Knopf, I believe that if such legislation were passed, not one out of ten tubercular patients would consult a physician, being afraid that in the event of a diagnosis for tuberculosis being found, he would be isolated from his near relatives and friends. In fact, the communication of tuberculosis is not as manifold and dangerous as it is supposed to be, if we take into consideration the sanitary improvements which now prevail in our dwellings; and at the same time I believe that stronger efforts should be used by the various medical societies and boards of health to prevent the sale of diseased meats.

I have been frequently asked how tubercle bacillus which might exist in cow's milk should cause phthisis pulmonalis, when autopsies reveal the fact that no tubercle lesions were found throughout the entire digestive tract?

The answer to this query is plain and simple: All material taken into the organism need not be absorbed through the lymphatics or chyle ducts, but may be taken up through the lymphatics of the larynx and thus cause direct infection of the bronchial cells.

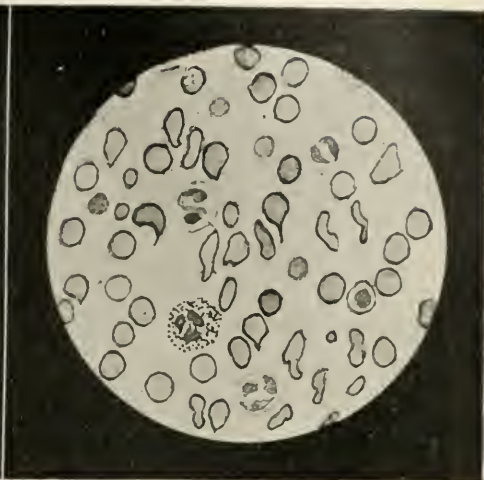
In many cases the bacillus tuberculosis is taken in food, but in rare instances will these germs find a propagating field until they reach the intestines.

I do not believe in selecting certain climates or latitudes for consumptives as long as hygienic and dietetic rules can be strictly adhered to at home. One place appears to be as good as another. I cannot speak for sanitariums, for the reason that the assembling and associating of a number of consumptives gives the patient too



CASE 20,113.

Hemoglobin, 51 per cent.	
Red cells.....	3,009,000
White cells.....	13,200



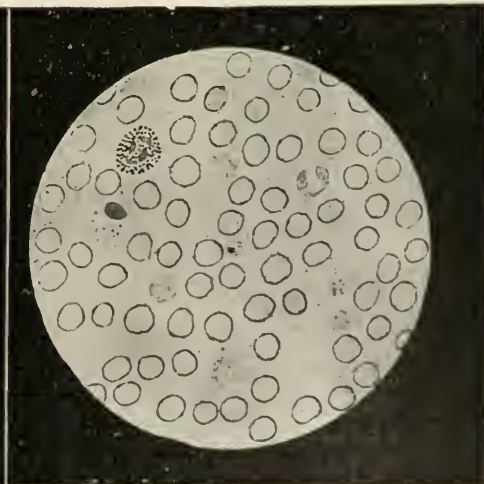
CASE 20,076.

Hemoglobin, 63 per cent.	
Red cells.....	3,710,000
White cells.....	14,100



CASE 13.

Hemoglobin, 83 per cent.	
Red cells.....	3,940,000
White cells.....	9,100



CASE 20,076.

Hemoglobin, 84 per cent.	
Red cells.....	4,005,000
White cells.....	9,400

much opportunity to concentrate his mind upon his affliction, which fact will lead to nervous derangements; and whenever we find a condition of nervous derangement, cell degeneration occurs.

I now call your attention to the various treatments employed in the treatment of tuberculosis. It appears to me that cod-liver oil is absolutely of no value; in fact, it has done more harm than good in all tubercular cases. Cod-liver oil will provoke nausea and subsequently digestive disturbances, and very little, if any, is absorbed in the system, which fact may be corroborated by a chemical quantitative examination of the feces. The administration of the various hypophosphites and iron tonics seems of little value in as far as we are not sure that the imbibition of inorganic principles into the organism will cause physio-chemical changes, converting such inorganic remedies into organic principles which constitute tissue pabulum. We necessarily need certain expectorants to alleviate congested conditions; but as a general treatment, we should adopt nuclein medication.

I am forced to advocate this suggestive treatment after considering that the disintegration of tissue is met with in each and every case of tuberculosis. In all tubercular conditions we note nuclein degeneration and subsequent phosphatic elimination.

I have explained why it is impossible for us to obtain true nuclein from the animal organism, and after extensive trials I have found that true nuclein can be derived from the vegetable kingdom, and such a nuclein is presented us in the form of concentrated nuclein known as tincture amal.

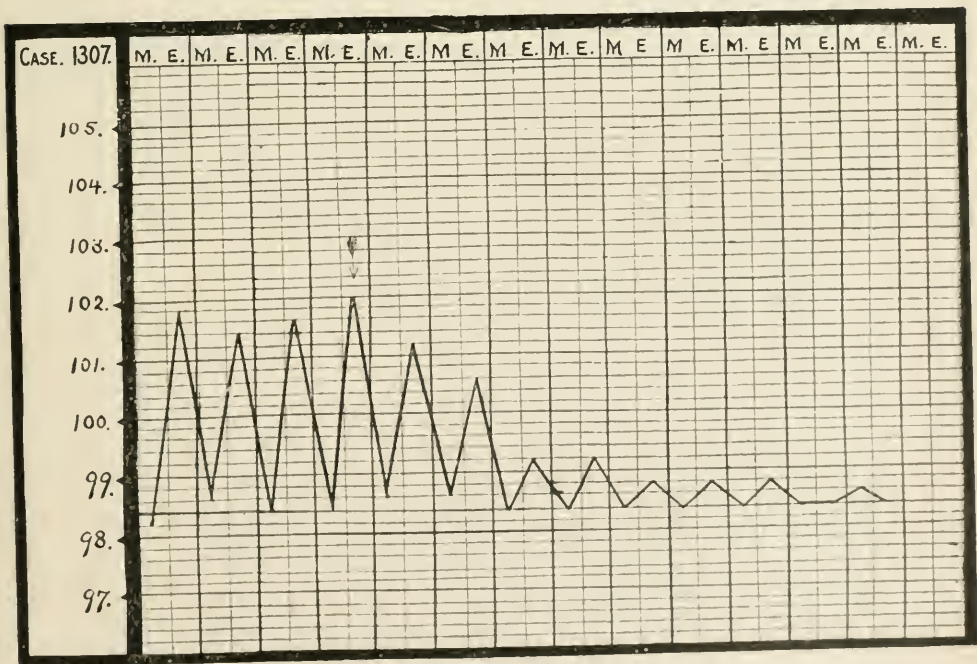
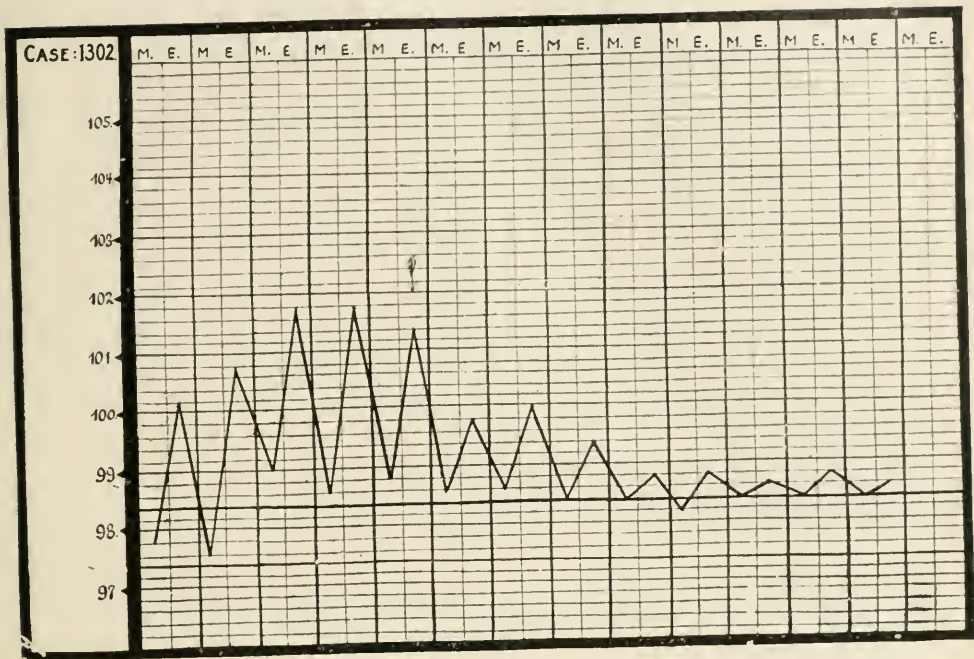
I herewith beg to cite a few cases, presenting for your inspection illustrative charts, which explain to you my previous reasoning and give you subsequent facts regarding nuclein medication in the treatment of tuberculosis.

I respectfully submit to you the results of experimentations with this nucleinic product (better known as tincture amal) in the laboratory and clinic in the treatment of tuberculosis, bronchitis and pneumonia.

While submitting to you the temperature and blood charts of the various cases, I will ask your indulgence to compare the results of my reports with the illustrations herewith presented for your inspection.

I wish you would lay particular stress upon the histological appearance of the white corpuscles in the blood of these cases at the beginning, and note subsequently the appearance of the younger white corpuscles, some of which are of basophilic granulation.

At the same time I refer to the urinary chart, and I ask you to make a comparison of the blood at its primary stage. Note the polynuclear leucocytosis, the large and excessive phosphatic elimination in the urine, the high prevailing temperature, the medication



employed, in fact of the clinical symptoms accompanying the case, and note the deduction in phosphatic elimination.

You will note an increase in the number of red cells accompanying a deduction of phosphatic elimination, which fact is a demonstration that we have thorough control of the anemia or impoverishment of the blood.

In the introductory lines of this article I explained the functions of the blood in as far as it concerns the distribution of oxygen by the red corpuscles, the distribution of tissue pabulum by the white corpuscles, and after examination of all charts you will note and coincide with my views that by means of nuclein medication, as exhibited in tincture amal, I have demonstrated that my path of investigation has been in the right direction.

I have already explained to you that the change of temperature (thermogenesis, thermolysis, and thermotaxis) is due either to a histological change of the individual blood cell or to an infection by foreign material of the entire circulation. Hence you will note that from the moment that nuclein medication in the form of tincture amal is resorted to in the various cases presented to you, we obtain a reduction of temperature of from two to three degrees. I was unable to find in any of these cases the presence of the tubercle bacillus in either the blood or the urine, but found same invariably in the sputum, excepting in the cases of pneumonia and bronchitis herewith recorded.

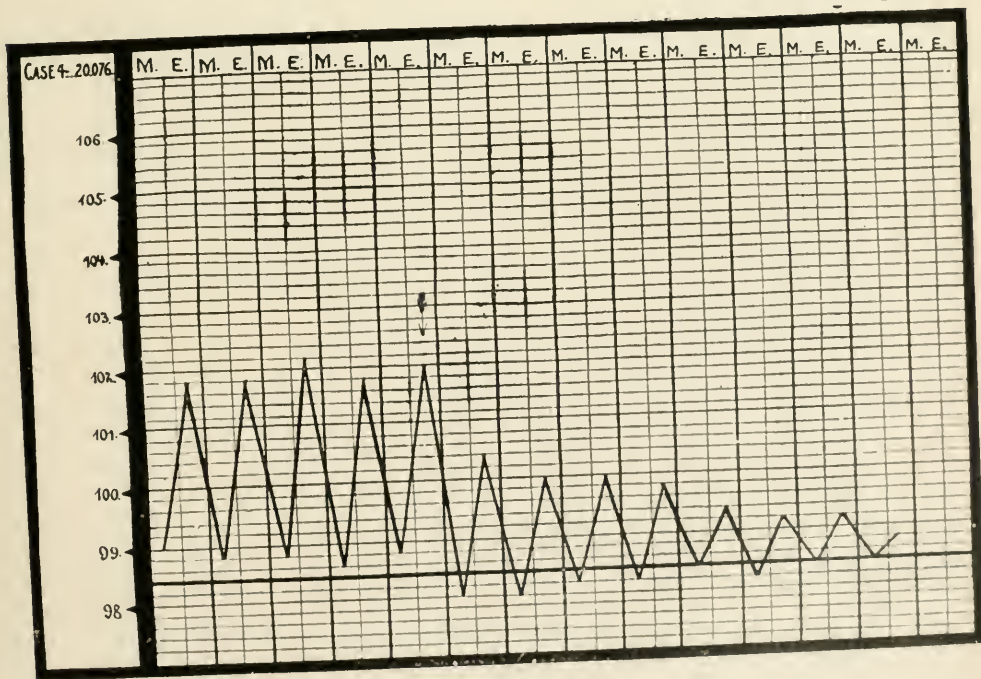
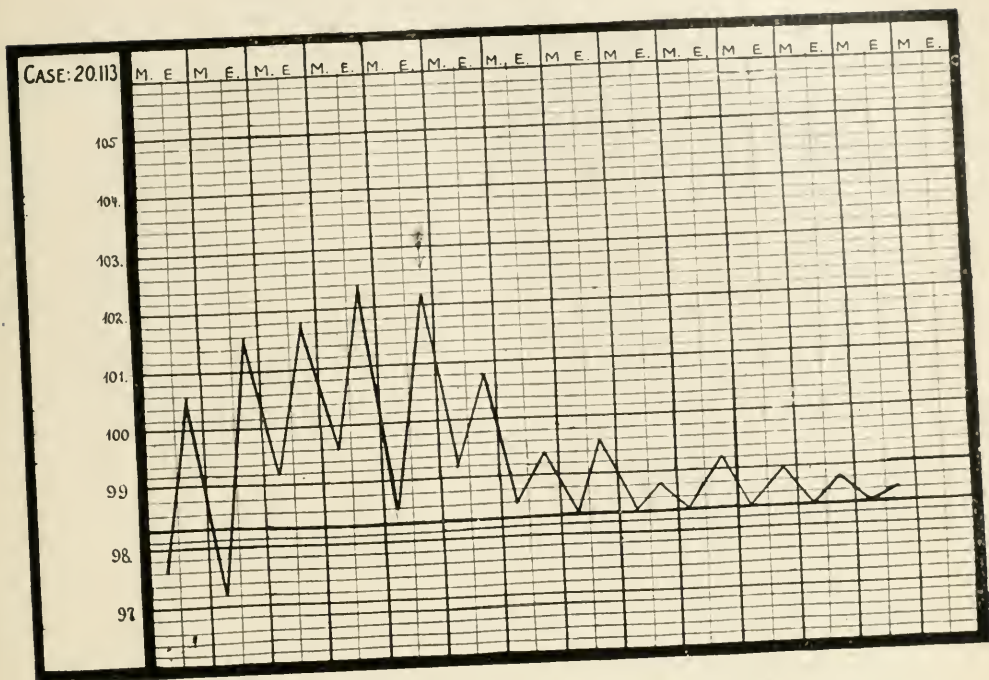
I cite to you Case No. 1302.

This case had been in the hospital for some months past, when it came under my observation, and a blood examination revealed 49 per cent. hemoglobin, 2,903,000 red cells, 9,100 white cells.

The elimination of phosphatic material in the urine amounted to 2.4 per cent. The patient, prior to and at this time, received medication in the form of cod-liver oil and creosote. This case is one of a few in which the administration of creosote does not exhibit a severe digestive leucocytosis.

Upon changing the medication to tincture amal, you will note a marked increase in red cells; and although you will note an increase in white cells, I beg to state that the increase of white cells consists entirely of lymphocytes, or the youngest and most active leucocytes. In other words, we have an increase of young white corpuscles rather than an increase of polynuclear leucocytes or aged leucocytes on the verge of disintegration and inactivity. A medication which will cause an increase of 29 per cent. hemoglobin and 797,000 red cells within a short period, deserves due consideration and test by those interested in the combating of any disease.

Referring to Case 1307, we find at the beginning 1.9 per cent. of phosphatic elimination, and again note that upon the administration of tincture amal, this is reduced to .9 per cent. The hemo-



globin upon first blood examination registered 51 per cent., red cells 3,100,000, white cells 10,600.

The latest findings are a total increase of 23 per cent. hemoglobin, an increase of 300,000 red corpuscles, and a reduction of 1,500 white corpuscles. This case exhibits a digestive leucocytosis attributable to the malignant influences of the administration of creosote internally.

Case 20,113 corroborates the findings of Case 1307. The same medication was used in these two cases, but in this case the digestive leucocytosis and the subsequent excessive elimination of phosphatic material in the urine are more forcibly demonstrated. At the first blood examination we find hemoglobin 51 per cent., red cells 3,009,000; white cells 13,200. Shortly after the administration of tincture amal, we find an increase (a marked increase) of red cells, and a decrease (a marked one) of white cells, and an absolutely marked decrease of phosphatic elimination in the urine.

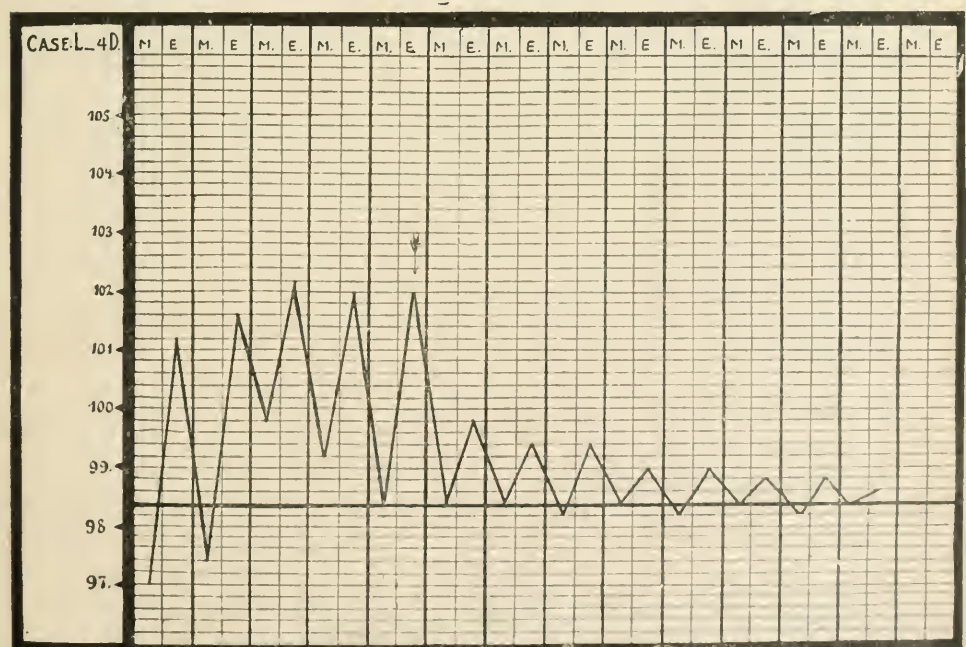
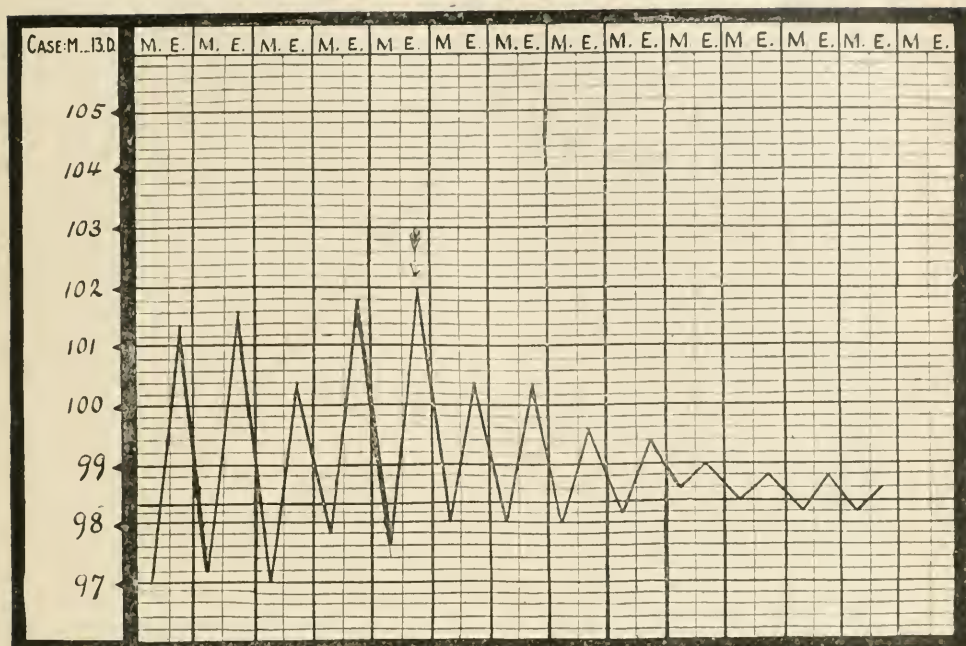
In a reasonably short time we have an increase of 931,000 red cells, a deduction of 4,100 white cells and an increase of 32 per cent. hemoglobin.

In all the cases cited, after some months' treatment recovery is assured.

It seems unnecessary for me to quote further clinical data in reference to the physiological action and therapeutic value of tincture amal in the treatment of consumption, excepting to call your attention to the cases of pneumonia and bronchitis which have rapidly responded under the treatment of tincture amal.

Neither time nor space will permit to give fully detailed clinical symptoms from day to day; it is only necessary to state that nuclein medication in the form of tincture amal caused the cough to grow less, expectoration clearer, night sweats and hectic fever disappeared, appetite and energy returned; in fact, it was the pleasure of both patient and physician to note marked improvements. I find it advisable to begin treatment by giving tincture amal in 1-2 ounce doses four times daily, and increase the doses as soon as a decreased phosphatic elimination in the urine has been demonstrated. Tincture amal is presented to us in two forms, the internal remedy just spoken of and the specially prepared form for inhalation and external use. This latter product should be used in steam atomizer morning and night, allowing the patient to inhale the medicated vapor for from five to ten minutes.

While discussing the subject of tuberculosis, which should not only confine itself to phthisis pulmonalis, but rather to all tubercular infections, and while reciting to you the value of nuclein in the form of tincture amal as the rational treatment in this disease, permit me to recall to your memory my former statement regarding the value of the iodides in the treatment of tuberculosis. I



have stated to you my reasons for discarding the use of iodide of potassium in the treatment of tuberculosis. I have previously objected to the use of this drug in the treatment of syphilis, and reported my reasons therefor before several medical societies, and at this time I recall to you my mention of the iodide of lime (Nichols) in the treatment of this disease as well as tuberculosis, especially when a differential diagnosis exists. I had the opportunity to be called into a case which had been diagnosed by thirteen leading physicians and surgeons as one of Hodgkin's disease. The clinical symptoms fully admitted of such diagnosis, and only a blood examination revealed the true condition, that of syphiloma.

Upon resorting to iodide of lime (Nichols) 10 grains, three times daily, the patient rapidly recovered, corroborating the correctness of diagnosis by means of a blood examination. The blood plates of this case are exhibited in Case L. A., Dec. 27, 1901, to April 30, 1902.

Referring to Case 1300, Dec. 18, 1901, to April 25, 1902—Diagnosis: Fibroid tumor, I cite the following history—Patient, Mrs. M., aged 35; noticed an abnormal swelling in iliac region. Consulted various physicians and surgeons in London, Eng., and Londonderry and Dublin, Ireland, who pronounced the case one of fibroid tumor, and advised surgical interference. Through persuasion of this lady's parents the patient came to the U. S. and consulted me. Blood examination and subsequent physical examination corroborated the diagnosis made by the European physicians and surgeons. Iodide of lime (Nichols), gr. x every four hours, accomplished the softening of tumor; aspiration was resorted to, the operation being performed by Dr. T. J. Fogarty, of Brooklyn, and tincture amal was given internally, one wineglassful every four hours. The patient rapidly recovered, permitting her departure to Europe. A recent letter tells me of her complete recovery.

Thus I show you the value of only one of the various iodide salts in the treatment of infectious or malignant diseases. Iodide of lime (Nichols) represents the halogen iodine in combination with the antiseptic chlorine.

I do not wish to burden you with more extensive data, but the results obtained, as cited in this paper, induce me to present to you my views of this question, for the purpose of inducing you to take up studies on lines laid out by me, and thus determine finally and conclusively that the views of the most eminent scientists regarding the medicinal value of nuclein in wasting diseases are correct.

Knowing full well that the object of this meeting is intended not only for the purpose of citing certain preventatives or prophylactic measures alone, but also to advance anything new to combat

the dreaded white plague, I have undertaken to present to you my views, and I trust that you will treat this paper with due consideration and thought. From it I trust you will derive some benefit for yourselves.

One fact I am convinced of, the reports of Dr. Eberle G. Welsh, of Baltimore, and numerous other physicians, in which these gentlemen definitely announce to have effected cures with tincture amal treatment, stand fully corroborated by my investigations. That consumption is curable has been frequently proven, not by hearsay after physical examination, but subsequently by *post-mortem* findings. The late Dr. Agnew, of Philadelphia, was examined by the leading physicians of that city when at the age of thirty-five, and the diagnosis was made of phthisis pulmonalis, and no hope was held out for him. As far as I can learn, the principal treatment in his case consisted of small rations of rare or raw meat, and a plentiful diet of raw or rare vegetables. In this way a certain small amount of nuclein was introduced into the system, and when Dr. Agnew lived to be sixty-three, at which age he died, a *post-mortem* examination was held, and was witnessed by most of the gentlemen who aided in making a diagnosis of tuberculosis twenty-nine years previously. The autopsy revealed normal lungs, with but few cicatrices. This is a point positive proof that the tuberculosis had been eradicated from the body, and had only left a few scars indicating its previous path of destruction. I cite this case, as it is known to most of you.

How many more cases could be cited, which are known to us, in which a *post-mortem* positively proves that consumption is a curable disease?

20 West 34th Street, New York.

SOME COMPARATIVE RESULTS OF THE MEDICAL AND SURGICAL TREATMENT OF APPENDICITIS.*

BY J. P. ARMOUR, M.D., ST. CATHARINES, ONT.

THE leading medical journals for some years past have given much space to the reports of operating specialists on the favorable results of the operative treatment of appendicitis. They have been practically unanimous in advising that an immediate operation should be done when it can be within the first 24 or 48 hours of the disease. This advice has been accepted by a considerable number of the profession in this Province, and acted on with much decision. This treatment has become a newspaper specialty, in which most of the operations are reported; and the citizens generally have come to believe that the operation is the only alternative for those who are so unfortunate as to become afflicted with this disease. While this surgical treatment has been adopted by a large and, I believe, constantly-increasing number of practitioners during the past few years, the results are such as to be worthy of careful consideration at the present time.

If this was a new disease (instead of an old one with a new name), of which we had no knowledge of other than operative treatment it might take some time to correct erroneous views regarding it; but it has existed, and we have data of the results of other treatment for long before the operative treatment came in fashion, and a comparison of these may do much to soothe the overtaxed consciences of those physicians in remote districts who do not feel they have the experience or facilities to operate themselves, and could not secure a specialist in time to meet the present requirements.

The operative treatment of this disease, in this Province, began early in the decade between 1890 and 1900, and became more general towards the end. Before that time this disease was classed in our statistical returns as peritonitis. Since 1896 it has been classed in our death returns as peritonitis, iliac abscess (typhlitis, perityphlitis, and appendicitis). As over 90 per cent of the diseases thus classed originate in the appendix, they might all be more properly classed as appendicitis and its extensions. In 1891 there were only 55 patients treated for this class of disease in the hospitals of the Province, and in 1901 there were 968. This is an indication of the extent to which the surgical treatment has grown, for most of these patients are taken to the hospital for operative treatment. The Government returns do not give the deaths from these cases separately. I endeavored to secure it direct from the hospitals, but only got returns from a few.

* Read at the Ontario Medical Association, Toronto, June, 1902.

For the three years ending 1886, before the operative treatment had been utilized, the deaths from this class of disease in the Province averaged 147 yearly; and for the three years ending 1900, when the surgical treatment had been in some measure adopted, the average yearly deaths had increased to 402. While the general death-rate increased less than 28 per cent., the deaths from this class of disease increased over 170 per cent.

The reported 264 cases treated medically in St. Thomas' Hospital, London, with a death-rate of 14 per cent., show that the disease has not a high death-rate when thus treated. These would be a selection of the worst cases from the crowded districts of that great city, and would be expected to have a far greater fatality than the cases that come under the care of the profession in this Province—and I believe this is the fact. Judging from the number treated in the hospitals, and the number occurring in several localities of which I have some knowledge, I believe that five thousand yearly would be a fair estimate of the number of these cases that are subjected to professional treatment. Judging from past results, the death-rate from medical treatment would be less than 4 per cent.; and from the mixed treatment, to the extent now practised, about 8 per cent. There are now about one-fourth of these cases treated surgically, and if they were all so treated, we would expect the death-rate to be about 20 per cent.

Within the past two years there has come within my personal knowledge 39 cases that were subjected to operation for this disease. Thirteen of these died shortly after the operation; two have hernias; one had fecal fistula; one is still afflicted with recurrent pain in the iliac region; and one, a previously healthy young woman, who happened to be at a large operating centre when she took a slight pain in her abdomen for the first time, and had her appendix removed within a few hours. Suppression of urine followed, and although the operative wound healed readily, she was confined to bed for three months. This was in October, 1900, and she has not yet recovered her former health. So with these six the operation did not end all their trouble, but the remaining 20 express themselves as being perfectly well, and thoroughly satisfied with the result of their experience. I have no reason to believe but all these operations were done with the average skill and care—some were done by noted specialists. During this period I have collected 46 cases treated medically, with only 2 deaths.

Since the beginning of 1901 I have treated 16 cases, the initial symptoms of which would have warranted operation according to current practice. Of these, five were severe, and developed more or less general peritonitis. One was ill 8 weeks, 1 five weeks, 2 four weeks, and 1 three weeks. The remaining 11 were ill for periods varying from two to 10 days. None were operated on, and all recovered, and have since been as well as before their illness. This

I believe is only the ordinary result of the medical treatment of the disease.

To one of these, a man aged 46, I was called on the fourth day (August 1st, 1901), with the expectation I would operate. The pain that began in the right iliac region had extended all over the abdomen, and was very severe from the first. When I arrived the patient insisted upon an immediate operation to relieve his intense suffering. A hypodermic of morphia gave the desired relief. In addition to the excruciating pain, there was great distension and rigidity of the abdominal walls; temp. 104; pulse 160. Nothing had been retained on stomach, nor had the bowels moved since the beginning of the attack. Up to this time the treatment had consisted of hot applications, and the administration of purgatives, which, however, were not retained—but no anodynes, a very effective practice when the object is to have the patient's consent to an operation. With frequent small doses of calomel and enemas an evacuation of the bowels was obtained on the fifth day of the disease, when the abdominal distension somewhat subsided. But it was with great difficulty that the bowels were subsequently kept acting, and all the severe symptoms already enumerated continued with little abatement to end of the fourth week, when there was a gradual subsidence. At the end of eight weeks the patient was able to leave his bed, and two weeks after resumed his usual employment, and has remained well since. This is a case which, had it been operated on and died, it might have been said it would have died anyway.

Had these sixteen cases been operated on when the diagnosis was made, what would have been the result? From what is known of such results—setting aside those brilliant specialists who do hundreds of operations with scarcely a death—would it be overstating the case to assume there would have been four deaths, some of which would have been of those that turned out to be the mildest cases; that four more would have some disability resulting from the operation, and the remaining eight to have promptly recovered from the operation, and none the worse of the experience, but living monuments of the value of the operative treatment of appendicitis?

There are occasional cases of acute septic general peritonitis from appendicitis that are rapidly fatal whether subjected to operation or not. These cases are not numerous, probably less than 1 in 50 of those that come under the treatment of physicians. It would appear to be to prevent the unfortunate results in those rare cases that surgical treatment at the beginning of disease has been so generally recommended by a certain class of operators. But it does not appear a rational procedure that 49 should be subjected to operation with the hope of saving the 50th; and especially so,

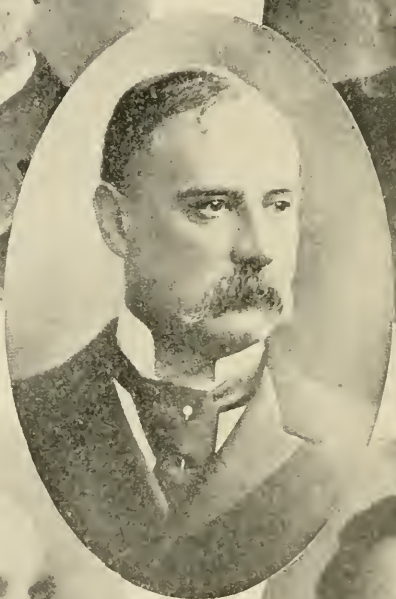
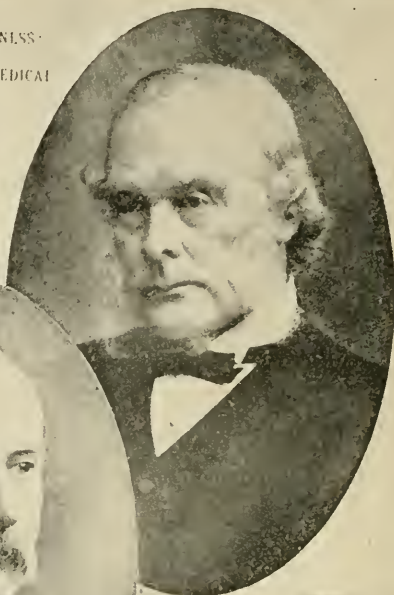
when operation at the earliest period available does not prevent a fatal termination in these cases.

We have gained much information from operative experience as to how effectually nature does its work in protecting the lives of those thus afflicted. How septic and pus centres are effectually isolated by plastic adhesions, and the septic material directed to points where it can escape with perfect safety to the life of the patient. We have records of iliac abscesses that opened into the bladder and discharged pus and fecal matter with the urine for weeks, and afterwards made a satisfactory recovery without operative assistance. I have noticed that when an inflamed, discolored ulcerated or gangrenous appendix is found in the process of operation, it is usual to assume that nothing but an operation could have saved that patient's life. But how few of such cases die when left to medical treatment and nature?

A view that has received much currency is that, when pus has formed, an immediate operation is imperative. While some few surgeons have been content to simply open the pus cavity and facilitate its drainage, the general practice has been to wash out the cavity and remove the appendix, and several deaths that I have personal knowledge of, have resulted from this practice. This is not in accordance with the best surgical practice to other parts of the body. The washing out of the pleural cavity in empyema is now pretty unanimously condemned by leading surgeons, and no experienced surgeon would think of amputating a limb through an acutely inflamed and suppurating surface. But it is surprising with what assurance some surgeons will lay open an iliac abscess, wash out the cavity, excise the appendix, and then be disappointed when the patient dies.

There can, I believe, be no question of the reliability, according to the returns furnished by our profession, of the death-rates in the Registrar-General's reports, and these establish the fact, which I believe cannot be otherwise accounted for, that the extent to which the surgical treatment has superseded the medical, in recent years, has more than doubled the death-rate from this disease. With such favorable results from medical treatment, surgical treatment might be dispensed with as a routine measure, and held in reserve for exceptional cases only. If it was limited, during the acute stages, to such cases as result in intestinal obstruction, and the opening and drainage of such abscesses as approach the surface, and to the removal of the appendix only during the quiescent period, I cannot but believe that many valuable lives might be saved that are now being sacrificed to the surgical treatment of the disease.

THE KING'S ILLNESS.
HIS MAJESTY'S MEDICAL
ADVISERS.



KING EDWARD'S MEDICAL ADVISERS.

Selected Articles.

THE ILLNESS OF THE KING.

The *Lancet* (London) of July 5th, writing upon King Edward's illness, says: The present condition of His Majesty the King and the future progress of his health, can be gauged best by a full consideration of the case from the very beginning. Our readers will be able to follow the thread of our remarks if they read in connection with them the brief account of His Majesty's illness which appeared in our second edition last week, and which we reprint below. Firstly, was there any condition present which might predispose to the developments of perityphlitis? Although no reference appears to have been made to it, it is far from unlikely that the severe attack of typhoid fever from which the King suffered in 1871 may have had some etiological connection with his present illness. The ulceration of the bowel in typhoid fever is especially severe near the ileo-cecal valve, and adhesions occurring as a result of the intestinal ulceration, especially when the attack has been prolonged, are not uncommon. Adhesions of this nature are liable to produce displacement and torsion in the neighborhood of the cecum, and it is now recognized that in this way the circulation may be distinctly interfered with, and that such disturbances of position and circulation are important predisposing causes in the production of perityphlitis. So that it is quite possible that the attack of enteric fever from which the King suffered more than thirty years ago may be really connected with the illness from which he is suffering now.

The present attack appears to date from some ten days earlier than the operation. For it was on June 14th that the King first complained of abdominal discomfort, but it was slight, and did not interfere with the journey to Aldershot. At midnight of the same day abdominal pain came on, and Sir Francis Laking was summoned and was able to relieve the urgency of the symptoms; and on the next day, June 15th, His Majesty was seen by Sir Thomas Barlow. Up to this time the signs and symptoms were indefinite, and though they were sufficient to suggest the possibility of perityphlitis, no trustworthy diagnosis could be made. On the afternoon of the 15th a chilly fit occurred; this was in all probability a real rigor, and marks the time at which, from the

after history of the case, we may conclude that suppuration commenced. We may interpret these symptoms by the light of our later knowledge as follows: The commencement of the perityphlitis dates from the first abdominal discomfort of which the King complained on Saturday, June 14th. It may have been connected with the great fatigue of the previous day, and the taking of a late supper; but it is quite possible that neither had anything to do with it. During Saturday and Sunday the inflammation extended and set up an adhesive peritonitis. To this was doubtless due most of the pain of which the King complained. Then pus began to form around the cecum. This suppuration was localized by the adhesions which had already formed between the adjoining coils of intestine, and if our suggestion be correct as to the influence of the attack of typhoid fever, old adhesions remaining from that illness may have assisted in confining the suppurative process. By Monday, June 16th, the King had recovered sufficiently to bear well the drive to Windsor, for he arrived there without fatigue. On Tuesday signs began to appear which rendered certain the nature of the affection, and when he was seen on Wednesday, June 18th, the local manifestations were well marked. In the right iliac fossa there was a well-defined, somewhat firm swelling, with distinct tenderness, but no very marked pain independently of pressure. The temperature was raised, and the diagnosis could be made with ease and certainty. Then would arise the question of operation. There are some in this country, and still more abroad, who advocate operative measures at the earliest possible moment, but by indiscriminate operation in all cases, without regard to the exact nature of the local condition, the best results are not obtained. It cannot be disputed that a large number of cases of perityphlitis recover without surgical aid, and that many others result in the formation of a localized abscess which may be evacuated without necessarily disturbing the cecum, without, indeed, it ever being established that inflammation in its vicinity was the cause of the trouble. The great danger in perityphlitis is general septic peritonitis. What may be called the "natural" method of prevention of this complication is by the formation of peritoneal adhesions, shutting off the focus of infection from the rest of the peritoneal cavity. To attempt to disturb the cecum while this process of localization of the suppuration is going on, can only lead to the hastening of the evil which it is desired to avert, for the breaking down of the protective adhesions will almost certainly cause the generalization of the peritoneal infection. There is the less need to discuss the question of the superiority of early or late operation, seeing that we have no proof in the King's case that the appendix was inflamed, but we may be permitted to express our complete approval of the course adopted by His Majesty's medical advisers.

With complete rest on Thursday, Friday, and Saturday, the King's condition improved, the temperature fell to normal, and he felt better in himself, and the improvement continued during the Sunday, so that on Monday His Majesty was able to journey to London by train. Up to Monday, June 23rd, it had been hoped that care and rest had served the patient so well that the necessity for active surgical treatment had passed away. This was only in accord with the earnest wish of the King, who was extremely anxious to carry out, at whatever pain to himself, the arrangements that had been made. On Monday, however, the probability of the presence of pus in the right iliac fossa was suspected, and on the morning of Tuesday, June 24th, it became clear that suppuration had occurred. The iliac swelling was again obvious, the pain had increased, and the temperature was once more elevated. All these signs pointed clearly to the formation of a localized abscess. The danger of delay was great. The formation of pus was evidently proceeding rapidly, and the abscess was extending. In such circumstances the impossibility of sanctioning any attempt at carrying out the Coronation ceremony was at once obvious. Nay, more, the necessity for the immediate evacuation of the pus was urgent, for if no outlet for it were provided the far greater danger of general septic peritonitis was imminent, a condition in which surgical interference is too often of small avail. Lord Lister and Sir Thomas Smith agreed that an operation was imperative, and the King gave his assent reluctantly, not because of the pain or the risk to himself, but because he knew the severe disappointment the change of plan would occasion to the many thousands who were assembling in honor of his Coronation.

To Sir Frederick Treves was committed the heavy responsibility of performing the operation. An incision was made a short distance above Poupart's ligament on the right side; the wound was steadily deepened, but it was not until it had obtained a depth of some four and a half inches that pus was reached. This was evacuated, and the abscess cavity drained by means of two rubber tubes. By the evacuation of the pus and the subsequent drainage the immediate risk of the involvement of the general peritoneal cavity was averted, and thus the danger of the disease was greatly reduced. The effects of the operation soon showed themselves. The pain from which the patient had suffered severely was markedly relieved, the temperature rapidly fell, and it was evident that the septic absorption had ceased. It was possible for his medical attendants to announce on the same evening that the King's condition was as good as could be expected after so serious an operation, that his strength was well maintained, and that the pain had diminished. There was an addendum to the effect that it would be some days before it could be said that the King was out of danger; this was a necessary warn-

ing to the public, for it may happen that the extension of the suppurative process does not cease with the evacuation of the pus.

During the earlier part of the first night after the operation His Majesty was restless and did not sleep, but after one o'clock some sleep was obtained. A fairly comfortable day followed, and but little pain was experienced except at the dressing of the wound. His strength was fairly well maintained. On the second night he had some refreshing sleep, and he improved in all respects, and the state of the wound continued satisfactory. On Friday, June 27th, it was announced that a fair night had been passed, and that the temperature remained normal. On Sunday, the fifth day after the operation, the King was sufficiently recovered to permit his being moved on to a couch for a few hours, and up to the time of writing the improvement has steadily continued. A fair amount of sleep is obtained, the King's strength increases, and the wound continues to progress in a satisfactory manner. It is, of course, most important that the abscess cavity should close completely and from the bottom, otherwise an intractable sinus would be not unlikely to result. The wound is, therefore, packed with gauze, and this necessarily occasions no small amount of pain. This is unfortunate, but cannot be avoided, and it is consoling to remember that the pain will decrease with each dressing.

We have followed the illustrious patient's progress from the commencement of his illness to the present time, and we are now in a position to consider the prognosis. The dangers which may arise may proceed from the patient's constitution, or be connected with the local lesion. As to the King's general constitution there is but little cause for anxiety. At his age, sixty-one years, he is probably as strong as the average of his subjects, and, apart from the harassing nature of his duties, and the energy and zeal with which he has ever undertaken all that he is called upon to do, there has been nothing materially to impair his general health. The severe attack of typhoid fever in 1871, to which we have already alluded, served for a time to weaken him, but the effect was transient. It cannot, however, be doubted that the grave disappointment which the King feels at having to postpone the Coronation may exert some depressing effect on him. To dispel as far as possible any untoward mental or sentimental condition must be the best endeavor of those around his bedside. Turning to the local conditions, we find several possibilities of harm. The wall of the abscess cavity is formed by coils of small intestine, which have become adherent owing to adhesive peritonitis; some of these adhesions have probably already commenced to organize. Somewhere in this wall there may be a peccant appendix, matted to the intestine by exuded lymph; from it and from the other parts of the wall of the abscess cavity pus may be still secreted. The chief danger is the

extension of the suppurative process to the general peritoneal cavity, but day by day the adhesions localizing the mischief are growing stronger, organization proceeds rapidly, and before long they will be strong enough to resist any strain to which they may be subjected. The danger from this cause has steadily grown less and less with every favorable bulletin. Again, the risk of the absorption of septic products from the abscess cavity is now very small, as all tension has been removed and the granulations which have formed offer an effective resistance to the passage of the toxins into the blood-vessels and lymphatics; at any rate, the state of the temperature shows that now no absorption is taking place. The chance of the occurrence of general septicemia may be disregarded. On the critical view of the situation of the King it may be said that there is great promise of a speedy and safe recovery from his illness; speedy, we say, though many weeks must elapse before he is well, for we must bear in mind the severity of the illness and of the operation performed for its relief; and safe because the probability of any complication supervening is remote. On the maintenance of his strength, apart from care in dressing the wound, depends mainly the recovery of His Majesty.

One further point requires consideration. If, as we may not unreasonably hope and expect, the King recovers from his illness, will a recurrence be likely, or will it ever be necessary to interfere with the appendix? The answer which would be given by those surgeons who have had most experience in abdominal surgery would surely be "No." When an abscess has developed in connection with the appendix and has been successfully drained, it is rare, indeed, for any recrudescence of mischief or for any further operation to be required.

The following account of His Majesty's illness appeared in the second edition of the *Lancet*, published on Wednesday, June 25th:

We were able to state yesterday, June 24th, that an abdominal operation had been successfully performed on His Majesty by Sir Frederick Treves on that morning. The anæsthetic was administered by Dr. Frederic Hewitt, and was borne well. His Majesty recovering consciousness without any ill-effects whatever. The operation was attended by no complications; a large abscess was found and evacuated. To-day, June 25th, we are able to give the following account of his illness.

We give this account of His Majesty's illness, and purposely do so in the briefest and plainest terms, because we know that, although our statement will primarily be read by our medical readers it is certain to reach the public, and it seems to us at the present juncture that it is highly important that the public should know the real state of the case. We may preface our remarks by saying that, while it is impossible to disguise the serious nature of the King's condition, it is also our joyful privilege to be able to contra-

dict flatly some of the sinister rumors that during the last forty-eight hours have been prevalent throughout the world.

On Friday, June 13th, His Majesty the King towards the evening was suffering from great fatigue. After attending the Court and the many arduous duties of the day, he had a late supper and went to bed, and on the following morning, Saturday, June 14th, he complained of abdominal discomfort. His Majesty was seen during the day by Sir Francis Laking, Physician-in-Ordinary to the King and Apothecary to the Household. In the afternoon he was distinctly better. He then left for Aldershot, where he dined with the Queen, being present in the evening at a "tattoo" held under unfortunate atmospheric conditions. On Saturday, at midnight, he complained of abdominal pain and a feeling of distension. Sir Francis Laking was sent for, and arrived at Aldershot at a quarter to five in the morning. Remedies were administered, and the symptoms were all relieved. It may be added that no morphia was given. But Sir Francis Laking, recognizing the presence of an abdominal trouble that might be serious, telegraphed for Sir Thomas Barlow, Physician to the Household, who arrived on Sunday, the 15th, and stayed there during the day. On the afternoon of Sunday His Majesty had a chilly fit, which in all probability amounted to a rigor. On the following day, Monday the 16th, he proceeded in a carriage to Windsor, adopting this method of travelling by his physician's advice, for it was felt by his medical advisers that if, unfortunately, his symptoms should develop for the worse, it would be much better that he should be in his own home. The journey was made in comfortable circumstances, he bore it well, and felt better at the end of it. On Tuesday, the 17th, recognizing that, in view of the approaching Coronation, no physical labor which could possibly be avoided should be undertaken, His Majesty reluctantly abandoned the idea of being present at Ascot. He remained recumbent most of the day, but drove for three-quarters of an hour in the private grounds attached to the castle.

On Wednesday, the 18th, His Majesty was seen by Sir Frederick Treves, and this point in the clinical history of his disease is one of the highest interest to medical men. The temperature was then elevated, there were swellings and tenderness in the right iliac fossa—in short, there were symptoms of perityphlitis. But during the following Thursday and Friday all these ominous symptoms disappeared. When Sir Frederick Treves saw His Majesty on Saturday, the 21st, his temperature had fallen and had been normal for two and a half days, the swelling in the iliac region had nearly vanished, and in every way the King was much better. It was then believed that the King was on the road to rapid recovery, and that he would be able to go through the Coronation ceremonies. Sunday, the 22nd, was uneventful, and on Monday,

the 23rd, the King travelled from Windsor to London, his entrance to the capital being received by the public as a proof that they need attach no credence to any of the many alarming rumors that had now become widespread. The King made the journey by railway. On his arrival the King saw Sir Frederick Treves again, and at this period His Majesty's medical and surgical advisers began to be suspicious that there might be pus in the right iliac region.

Next day the necessity for operation became clear. At 10 o'clock on Tuesday morning the urgency of an operation was explained to His Majesty, and recognizing that his ardent hope that the Coronation arrangements would not be upset, must be disappointed he cheerfully resigned himself to the inevitable. Before the actual decision upon operation was arrived at, Sir Frederick Treves, Sergeant-Surgeon to the King, took the advice of the two other Sergeant-Surgeons, Lord Lister and Sir Thomas Smith, and they as well as Sir Thomas Barlow and Sir Francis Laking, came to the unanimous conclusion that no course but operation was possible in all the circumstances. To delay would, in fact, be to allow His Majesty to risk his life. At 12.30 on Tuesday, the 24th, the operation was performed by Sir Frederick Treves, and concerning this there is very little to add to what we have already said. The king was placed under an anesthetic by Dr. Frederick Hewitt, anesthetist to His Majesty, an incision was made by Sir Frederick Treves in the usual place, and a large abscess was opened. The incision was four and a half inches deep, and some decomposed pus was evacuated. The cavity was drained by two tubes of large calibre and packed with iodoform gauze.

Such is the brief clinical history of His Majesty's illness, and only one or two comments are necessary from us to enable the public to understand the position. It will be seen that the story makes the bulletins completely clear, and shows them to be exactly accurate. The idea that some dreadful news is being kept back ought, we think, to be dispelled.

Firstly, the King in his illness has throughout been advised by his proper medical attendants. When Sir Francis Laking, Apothecary to the Household and Physician-in-Ordinary to the King, desired a consultation, Sir Thomas Barlow, Physician to the Household, was sent for. When a surgical opinion was necessary, in view of unfortunate developments, Sir Frederick Treves, Sergeant-Surgeon to His Majesty, was called in to consultation. When he and the two physicians recognized the urgency of His Majesty's symptoms the two other Sergeant-Surgeons to the King, Lord Lister and Sir Thomas Smith, were summoned to express an opinion before the last critical step was taken.

The second point to which we would call attention is the absolute sincerity of every bulletin that has been issued, for this sin-

cerity, it seems to us, should prevent the public from giving heed to the wild rumors now rife. His Majesty is suffering from perityphlitis, and nothing else. It is an unfortunate fact with regard to perityphlitis, as all our readers know, that the symptoms may, for various reasons, be entirely masked. This it was that absolutely prevented the necessity for operation being apparent until the Tuesday before the Coronation.

There was no symptom of malignancy present.

TRINITY'S JUBILEE CELEBRATION.

The special convocation in connection with the jubilee celebration of Trinity University, on June 25th, will be remembered as the most brilliant event in a splendid commemorative programme. Trinity honored itself by conferring honorary degrees on a number of distinguished Canadians, prominent among whom were Sir Oliver Mowat and Sir John Boyd, who were unfortunately unable to be present; Hon. Richard Harcourt, the Minister of Education for Ontario; Dr. William Osler, of Baltimore, Maryland, one of the most distinguished of America's surgeons, and a member of a great Canadian family; Mr. James P. Whitney, M.P.P., the leader of the Ontario Opposition, as well as a number of prominent educationists, jurists, and clergymen from different parts of the Dominion. The proceedings were held in Convocation Hall, which was crowded to its fullest extent. The speeches were necessarily curtailed in length, but were marked by hearty congratulations for and good-will toward Trinity. The subject of federation was boldly mooted by Prof. Clark, acting Chancellor, in the absence of Chancellor Robinson, but Bishop Dumoulin, of Niagara, expressed a view to the contrary, which he repeated with great vigor at the thanksgiving service in St. James' Cathedral in the evening. Prof. Clark made it clear in his address that one of the conditions which Trinity would insist upon would be the retention of its residence system and its present methods of internal administration.

The undergraduates were in possession of the gallery during the afternoon, and as usual punctuated the proceedings with piquant wit and song, some of it of good quality.

It was 4.30 o'clock when the academic procession entered the hall, the long row of red-hooded dignitaries being greeted with loud cheers. With the acting chancellor on the platform were the following, among others, in addition to those who were to receive honorary degrees: Provost Macklem, Principal Hutton, W. R. Brock, M.P., Dean Geikie, Rev. Canon Worrell, Rev. Canon Cayley, Rev. Canon Welch, Rev. E. C. Cayley, J. A. Worrell, K.C., Rev. W. Carey Ward, Rev. Dr. Roper, of New York; Elmes Henderson, John Francis Waters, of Ottawa, Dr. Caesar, Dr. R. J.

Reade, Rev. Dr. Lewis, of Walden, N.J., Provost James, of the Western University, London, Dr. H. B. Anderson, Dr. Wishart, Dr. H. P. Parsons, Rev. J. Pitt Lewis, Dr. Arthur Jukes Johnson, D. R. Keys, N. F. Davidson, Rev. J. C. Farthing, Dr. Charles Morse, of Ottawa, Dr. N. A. Powell, William Ince, Prof. Smith, Dean Rigby, A. H. Young, Rev. C. L. Ingles, Rev. E. B. Kenwick, Rev. James Thompson, of Ingersoll, Beverley Jones, Rev. Canon Tremayne, Rev. C. E. Thomson, Frank Ford, Rev. W. H. Clark, Dr. Ham, Dr. Nevitt, Rev. Prof. Jenks, Rev. T. W. Paterson, Rev. E. L. King, Rev. H. H. Bedford Jones, Rev. Prof. Duckworth, Prof. Montgomery.

After prayer by Dean Rigby, and the singing of "God Save the King," Prof. Clark addressed the gathering briefly. They were met, he said, to celebrate an event of great importance in the history of that university, which had reached the age of fifty years a tolerably long life for an institution in so young a country. After regretting the absence of the Chancellor, Prof. Clark remarked that the choices for the honorary degrees which they were met to present had been very carefully made, and the persons honored would reflect honor on the university. "There is another subject to which I wish to refer," he continued, "a subject which is occupying much thought of the members of the university. I refer to the possible change in our academical relations. We are at this present moment both a university and college. It is possible—I say possible, I do not know, I do not pretend to knowledge which I do not possess—it is possible that before long we may for a time at least suspend our university functions and go into union with the other great universities of this great city. (Voices—No.) Evidently we are not all of one mind on this subject. (Applause.) But what I wanted to say is of even greater importance than what I have said, and my friends in the gallery will anticipate tolerably well what I am about to say, because I have said it to them already.

"Whenever the change takes place in the relation of this college to the other colleges and to the University of Toronto, for example, there will be no change in the internal administration of the college. (Hear, hear.) Whenever the change takes place, and I am not going to argue that question; a great deal can be said on both sides—Trinity College will be substantially and essentially what Trinity College has been in the past. When I say that my friends know that I do not mean that Trinity College has realized its ideal in the past. You see, that statement is received with absolute silence, and I am very glad it should be so, because it is well we should submit ourselves to a process of self-examination. Whether we have realized our ideal or not, we have an ideal which we have pursued with fair steadfastness for over fifty years, and I say our ideal is to have a college in which religion is part of the teaching. The other point is that we regard it of great importance

that the students of our college should have a common residence and intercourse within the college walls, living there day by day and week by week. I consider this of immense importance, and perhaps I may be permitted to say that I have some personal right to speak on this subject, because I saw the one system, the system of merely attending lectures, in the University of Aberdeen, and I saw the other system in the University of Oxford, and there can be no comparison between the one system and the other. (Cheers.) Whatever happens, I was going to say, it is the steadfast resolve of the corporation of Trinity College, of the governing body of the college, and of the Bishops of Ontario, who have supreme control over this university, and of the teaching staff of this university, and of this college itself—their supreme resolve it to carry on the residential system in connection with this college. (Cheers.)

The proceedings were here varied by the undergraduates rendering a topical song to the well-known tune of "Beer, Glorious Beer," which beverage has recently been banished from Trinity. The chorus ran:

"Milk, milk, glorious milk,
Fill yourselves right up with milk,
Take a good deal of it, make a good meal of it,
Stick to the farmer's drink—milk.
Don't be afraid of it, drink till you're made of it,
Pour down the stuff fine as silk,
Up with the sale of it, down with a pail of it,
Glorious, glorious milk."

At the conclusion of the song the acting Chancellor remarked, amid loud laughter: "That's very nice, but we mustn't have too much of it."

The following ladies and gentlemen then received their M.A. degree, the greeting of the acting Chancellor by the ladies being a great stimulant to undergraduate wit, provoking such remarks as, "Shake the tiger's paw": Alex. Allen, Beatrice Bovell, Ianthé W. Constantinides, Florence E. Deacon, John Dunning, Lily B. Emery, Guy B. Gordon, H. C. Griffith, Frank W. Hovey, Constance Laing, Geo. W. Locke, Eva Robinson, Frederick J. Sawers, Fred. J. C. Shaw, Norman Somerville, Gerald B. Strathy, James Thompson, Edith Wadsworth, W. Rein Wadsworth, W. Ridout Wadsworth, and Louise Warren. The degree of D.D., *jure dignitatis*, was conferred upon Very Rev. Lewis Evans, Dean of Montreal, and Very Rev. Frank Vernon, Dean of Portland, Me., and the degree of D.C.L. in course, upon A. Claude Macdonell.

Prof. Smith, the public orator, then prefaced the introduction of the candidates for honorary degrees with the following oration in Latin:

"Domine pro Cancellarie, Academia Trinitensis anno quinquagesimo disciplinæ ac doctrinæ institutæ, felicissime jam exacto,

hunc festum diem magna cum omnium laetitia concelebrat. Gaudemus enim et Deo gratias agimus quod tot clari et boni vitae necnon feminae, ab alma nostra mater sunt educti; quot nostra universitas per omnem hanc provinciam ac Dominionem, per Imperium Britannicum et apud extequentes famam optimam nomenque insigne est adepta. Itaque hodie permultos amicos ac fautores ejus, undique huc nos salutatum progressos, libentissime, salvere jubemus. Et praecepit hos viros, quorum alii inter Alumnos Trinitenses iusignes habentur, alii alias de republica bene merentur amplissimo honore adficere placet. In primis enim honoris causa nomino Oliverum Mowat, 'virum pietate gravem,' summa humanitate praeditum, equitem illustrem, Regis Legatum Provinciae Ontariensis, quam optime jamdudum gubernat.

"Atque hi reverendi viri, ecclesiae militantis, ut ita dicam, vetera et jam laboribus fortissimi adsunt; illi aut in foro aut in senatu praestanti alii in causis judicandis vel defendendis excellunt; alii communium litterarum et pelitioris humanitatis studiosi, summam laudem adepti sunt; alii denique in juventute educanda et instruenda multa profecerunt. Itaque laud scio an Aademia Trinitensis cum tales viros exornet, tum ipsa magis exornari videatur. Praesento igitur ad te hos viros dignissimos qui in summos honores admittantur."

The following were first presented for the degree of D.C.L., honoris causa: Diocese of Algoma, Ven. Thomas Llwyd, Archdeacon and Bishop's Commissary; Diocese of Huron, Rev. G. C. Mackenzie, Rural Dean of Brant; Diocese of Niagara, Very Rev. Stuart Houston, M.A., Dean of Niagara; Diocese of Ontario, Ven. Clarendon Lamb Worrell, M.A., Archdeacon of Ontario, and Professor in the R.M.C.; Diocese of Ottawa, Ven. Jas. J. Bogert, Archdeacon of Ottawa; Diocese of Toronto, Ven. Thos. W. Allen, Millbrook, Archdeacon of Peterboro'; Ven. Samuel J. Boddy, Archdeacon of York.

In presenting these venerable towers of the Anglican Church, Bishop Thornloe, of Algoma, referred to their long record in active work, which, he thought was sufficient discipline and training to entitle them to the degree.

In introducing the next five for degrees, "in recognition of distinguished service in the cause of education," Bishop Dumoulin of Niagara said: "I have very great pleasure in presenting the distinguished group now standing before you. It is a most distinguished group indeed. I see first on the list the Hon. Minister of Education. I am very well aware, and so are all of you, of the difficulties he has often to overcome, and the delicate diplomacy with which constantly he discharges those most difficult duties. I only hope, and I honestly express the hope that he may break down and fail in bringing about that alliance which was fore-shadowed in the speech of the Vice-Chancellor. (Cheers.) I desire to present

the next on the list, a most distinguished candidate, for this honor, who has exalted and already distinguished a name of the highest position in Canada, and has triumphantly carried it across the line and raised it to the very highest pinnacle in the United States. I am very glad next in order to see the names of two clergymen, one the Principal of Lennoxville College in the Diocese of Quebec, the other the Principal of Ridley College in my own diocese, who has done very lasting and honorable work in the cause of education, and finally it is my privilege to present a gentleman who has, I think, in his office as Librarian of Toronto, done more than any to place literature in the hands of the public." (Cheers.) The following were then invested with the degree of D.C.L.: Hon. Richard Harcourt, M.A., Minister of Education; Dr. William Osler, F.R.C.P., Physician-in-Chief in the Johns Hopkins Hospital, and Professor in the Medical Faculty of the Johns Hopkins University, Baltimore, Md.; Rev. James P. Whitney, M.A., D.C.L., Principal of Bishop's College, Lennoxville, Que.; Rev. J. O. Miller, M.A., Principal of Ridley College, St. Catharines; James Bain, jun., Chief Librarian, Toronto.

In introducing the third group, Provost Macklem spoke of the great services to the Province rendered by Sir Oliver Mowat, as Premier and as Lieutenant-Governor; by Sir John Boyd as Chancellor of Ontario, the absence of both of whom he regretted. He also praised Mr. Justice Irving, of Victoria, B.C., and Judge Senkler, of Perth, as eminent jurists, and referred to Mr. Jas. P. Whitney, whose name was greeted by a voice in the gallery with, "We won't whack Whitney," and applause, as a man of prominent public position and as a good friend of Trinity. Mr. E. Douglas Armour, K.C., was also presented. Dr. Ham presented Mr. J. Humfrey Anger for the degree of doctor of music, *honoris causa*, while the degree of Master of Arts, *honoris causa*, was conferred upon Rev. Frank W. Kennedy, missionary in Japan, in *absentia*.

In acknowledging the honor paid him, Hon. Richard Harcourt expressed deep gratitude. He could speak with knowledge of the pride of the undergraduate on receiving his degree, and therefore he could appreciate the honor now paid to him. He was particularly proud to receive a degree from a university whose history had for fifty years been interwoven with the history of the church of which he was a member, and in the fortunes of which he took so deep and abiding an interest. He recalled the success Trinity had had under previous Provosts, and prophesied that the brightest chapter of all would be written in connection with the work of Provost Macklem. (Cheers.) He congratulated the authorities of Trinity on their fifty years of exalted service to the city, and on their commencement of a second period of equally exalted service, under the best auspices possible. (Cheers.)

Dr. Osler said the occasion carried him back to his college days

in his own country. It was a double pleasure to find that he was appreciated at home. He thought there was an improvement in the behaviour of the students since his college days, when Mr. J. A. Worrell, Dr. Johnston, and others, were undergraduates. He thought he had started life under a very, very favorable situation, as he had come at the tail-end of a long family, and with twins ahead. (Laughter.) He recalled his entrance to Trinity College School and to Trinity College as two important epochs in his life. He had spent a year and a half at the latter, and then drifted off into medicine. He would never forget the influences which had been brought to bear on his life while at Trinity. (Cheers.)

Mr. J. P. Whitney, M.P.P., after expressing thanks for the honor, wondered if they had not called upon the wrong J. P. Whitney. He declared that the Minister of Education had stood up before he was called upon and delivered his speech. (Laughter.) As a rule, he added, there was an unfailing community of ideas between the Minister of Education and himself. (Laughter.) They thought the same thoughts upon many subjects.

A voice—Some you don't.

He thanked them most heartily and most earnestly for the distinguished honor, and promised that for the future the interests of that university would receive every possible attention from him.

Dr. J. Humfrey Anger and Dean Houston also spoke, and the proceedings closed with the benediction by Bishop Dumoulin.

There was a large gathering in St. James' Cathedral in the evening for the thanksgiving service, which concluded the jubilee celebration. Bishop Dumoulin preached the sermon, which was taken from John xvii. 3: "And this is life eternal, that they might know Thee, the only true God, and Jesus Christ, whom Thou hast sent." After dealing with the importance of knowledge, and the relation of religion thereto, Bishop Dumoulin argued in favor of the teaching of religion with secular education, as the means of preserving character, inasmuch as the Sunday Schools had failed to do the work. From this he adverted to the position of Trinity, which was founded by Bishop Straehan, when an old man, as the result of the secularization of King's College into the University of Toronto. Trinity had met the high hopes and secured the ardent loyalty of the church of that generation. Her work for more than half a century had justified its foundation. She had sent forth generation after generation of men, faithful, well trained and learned, to plant a solid Church of England in this country. She had filled the ranks with men of eminence and influence. Her foundations were upon the Holy Hill, far-off, where no one might shake them. Trinity and the church schools leading up to her stood for education and religion. What God hath joined together, let no man put asunder. While Trinity stood she would command

the admiration of all churchmen in Ontario, and she could appeal to them for support and sustenance.

He spoke for himself, and himself alone, Bishop Dumoulin said, when he deprecated any departure from the basis upon which Trinity was founded and conducted for half a century. He hoped and prayed the day would never come when she would surrender her charter, or even hold it in abeyance, or give up the flag which had so successfully and grandly floated from her classic spires over the heads of two generations of steadfast churchmen.

Standing where she is, said Bishop Dumoulin, in closing, our own church university will command and will have the love and support of her own children, and of generations yet to come. She will be strong in her original strength. The great spirit that gave her birth will keep her alive. What compromise or amalgamation will give her advantages? She will be like Samson, shorn of his strength, a pitiable object for the mockery of the Philistines.

Much credit for the success of the celebration of Trinity is due to Mr. A. H. Young, clerk of convocation, whose exceptional administrative ability contributed greatly to the carrying out of the programme without delay or confusion.

NEW FREE CONSUMPTIVE HOSPITAL OPENED AT GRAVENHURST.

The new Free Consumptives Hospital of the National Sanitarium Association was formally opened on July 5th. A special train of eight coaches went up from Toronto, carrying about four hundred friends of the institution, which has lately grown and developed on the shores of Lake Muskoka.

Among those from Toronto were: Chief Justice Meredith, Vice-President of the Board of Trustees of National Sanitarium Association; Mr. and Mrs. W. J. Gage and Miss Gage, Hugh Blain, Mayor Howland, Ald. Hubbard, Ald. Oliver, Controller Graham, Hon. J. R. Stratton, Rev. Dr. Dewart, Rev. J. Pitt Lewis, Dr. Wm. Oldright, Dr. Charles O'Reilly, Dr. Powell, Dr. F. N. G. Starr, Dr. Grant, Gravenhurst; C. J. S. Robertson.

The special train arrived at Muskoka wharf about 1.30 p.m., and the fine boat, Medora, conveyed most of the visitors to the Sanitarium wharf, where carriages were taken for the new free Hospital. Many were also conveyed across the lake on Mr. W. J. Gage's steam launch, *Ina*.

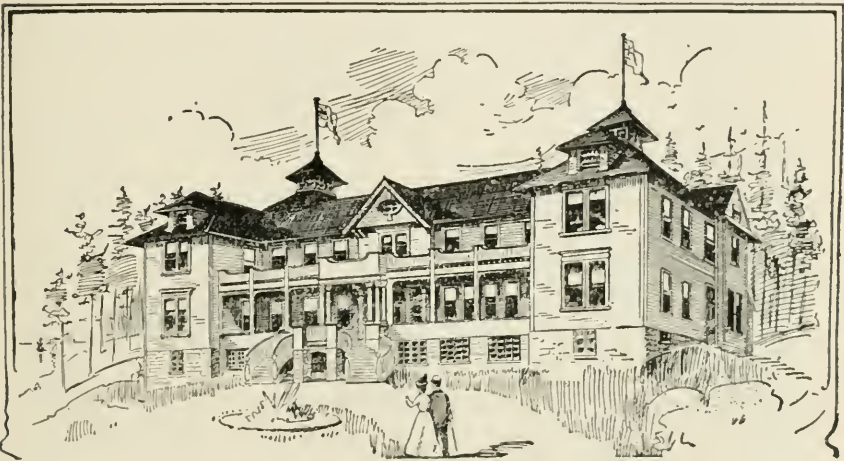
The Free Hospital for Consumptives is delightfully situated on Lake Muskoka, on a bluff surrounded on three sides by the waters of this beautiful lake. To the rear is the dense forest, giving the institution a picturesque setting. It was opened on

the 23rd of April last. So urgent were the calls for admission that since then forty patients have been registered.

After an inspection of the buildings, Sir William Ralph Meredith formally opened the institution. He said five years ago the first sanitarium for consumptives was opened, and the results have been eminently satisfactory. The first building was erected at a cost of \$20,000, one-half of which had been contributed by Mr. W. J. Gage, and the rest by the late Hart A. Massey.

Following the erection of the main building were the following cottages:

The Christie Cottage donation of \$5,000 from the late Wm. Christie.



FIRST FREE HOSPITAL FOR CONSUMPTIVES IN CANADA.

Opened to receive patients April 23rd, 1902.

Erected through the gifts of W. J. Gage, Esq., and the Hart A. Massey Estate, Toronto.

The Rosemary Cottage, costing about \$3,500, the gift of Mrs. Jackson Sanford, of Knoxville, Tenn.

The Wm. Davies Cottage, costing about \$2,000, the gift of Wm. Davies and family, of Toronto.

D. Frank Bull Cottage, costing about \$2,000, the gift of Mrs. T. H. Bull, Toronto.

The Wm. Mavor Cottage, costing about \$2,000, from the estate of the late Mrs. Jessie Mavor, Pickering, Ontario.

The Muskoka Cottage Sanitarium plant and equipment has cost rather more than \$5,000. The free hospital, as now constituted, provides for fifty patients, whilst arrangements have been made by the trustee board to extend the accommodation to one hundred.

Mr. W. J. Gage related the circumstances leading to the establishment of the National Sanitarium Association. About ten years ago some gentlemen conceived the idea of establishing an institution where those suffering from the dreaded disease, consumption, could be effectually nursed and treated. He had promised to contribute \$25,000 toward this object, and was followed by many others who came forward with their donations. The sanitarium was built, and since its creation, of the 600 patients who have been treated, about 60 per cent. have been discharged as cured, 25 per cent. as partially cured, and 10 per cent. were carried off by the disease.

Mr. Gage referred to the loss the Board of Directors of the



ADMINISTRATION BUILDING—MUSKOKA COTTAGE SANATORIUM.

Association had sustained through the death of Mr. Walter Massey, who, had he lived, would have assisted further in the work. The building erected could not boast of an endowment fund, but the trustees felt safe in trusting to the generosity of the public in carrying on the work thus inaugurated.

Mayor O. A. Howland made some happy allusions to the philanthropy of those citizens who had, by their generosity, contributed of their means to the support of an institution so worthy. He spoke for the consumptive patient in Toronto, who was denied admission to the regular hospitals until the National Sanitarium was undertaken and carried to a successful end. He wished the institution god-speed, and in conclusion alluded to the generosity

of the late John Scott, who left part of his funds to the sanitarium.

Hon. J. R. Stratton, Provincial Secretary, inspected the building, but was unable to remain for the opening ceremonies, owing to important business in Peterboro.

Mr. Hugh Blain, the next speaker, said there was no reason why the poorest in the City of Toronto could not have the same opportunity to obtain relief as efficiently as wealthy persons. Since establishing a free hospital, the railway company had promised to convey poor patients free, and this would enable them to obtain the benefits without pecuniary inconvenience.

Alderman Hubbard added his expressions of satisfaction over the efforts of Toronto's philanthropists in creating and establishing such a place for the alleviation and cure of consumption.

Controller Graham and Rev. Dr. J. Pitt Lewis followed with short expressions of their wishes of success.

Three cheers for Mr. W. J. Gage were given, and "God Save the King" was sung, after which the party boarded the boats to the train.

THE CLIMATE OF HOT SPRINGS, ARK.

From a climatic standpoint, the Hot Springs of Arkansas, the most wonderful hot springs in the world, could not have been more advantageously situated. They are removed from all extremes. Located in the South, northern visitors find here a sure escape from the severities of their winters. Driving, horseback riding, golf, and all outdoor sports and recreation can be indulged in four days out of five all winter. In spring the weather is perfect.

Summer, usually hot at this latitude, is here tempered by an elevation of 1,000 feet above sea-level, and by the surrounding peaks of the Ozark Mountains, which rise several hundred feet higher in all directions. The nights are invariably cool, and the pure mountain air and constant southern breezes make this the ideal season for invalids from all parts of the country. The mountains not only exert a wonderful influence on the climate, but they afford magnificent views and scenery, and to crown all, they are covered with limitless stretches of pine forests, so much prized for their health-giving qualities; and the beautifully graded Government drives, quiet country roads, walks and horseback trails, make it all easily and charmingly accessible.

Government statistics show that out of a total of 486 cities, and towns in the United States, only five have as low a death-rate as Hot Springs. There is only one city in British America having one as low, and none at all in England or Continental Europe. The death-rate among the permanent residents of Hot Springs is seven per 1,000 inhabitants. The rate among the 50,000 annual

visitors is very small, being only a little more than one and one-tenth per cent.

The Hot Water, Baths, and Bath-Houses.—The average temperature of the waters of the seventy-two Hot Springs of Arkansas is 135 degrees Fahrenheit; they discharge 1,000,000 gallons per day. There are, all told, at Hot Springs, twenty-two bath-houses, which pay the Government for the privilege of using the waters.

The Government fixes the prices of the baths at all the different houses, and also the attendants' fees, and no more and no less than this price can be charged under the severe penalty of forfeiture of license.

The prices of baths at the different bath-houses are graded according to their equipment and facilities. The water is the same at all.

The price of attendance is \$2.25 for a course of twenty-one baths, and is optional with the bather.

Action of the Water.—Their natural heat, their absolute purity, and consequent unparalleled solvency and eliminative action, together with the presence of a combination of hydrogen and silicon, and of free carbonic acid gas in large quantities, all soluble medicines can be administered and tolerated while using these hot waters in much larger doses than elsewhere, hence they are more active and produce beneficial results in less time and with greater permanency.

Briefly stated, the use of the Hot Springs waters opens the pores and channels for the expulsion of matter injurious to health, arouses torpid and sluggish secretions, stimulates the circulation, the muscles, the skin, the nerves, the internal organs, and purifies the blood, removes all aches and pains, restores the exhausted, revives the debilitated, and helps build up, and renews the entire system.

The water is almost entirely free from organic matter, making it practically a pure spring water, but it holds several valuable minerals in solution, in addition to being fully charged with free carbonic acid gas. The following average analysis of seven of the springs is that of John C. Branner, State Geologist of Arkansas:

Constituents	Grains per U.S. gallon.
Silica - - - - -	2.58
Chloride of Soda - - - - -	.27
Carbonate of Soda - - - - -	.04
Carbonate of Magnesia - - - - -	1.13
Carbonate of Lime - - - - -	7.15
Sulphate of Soda - - - - -	.41
Sulphate of Potash - - - - -	.25
Sulphate of iron - - - - -	.05
Total grains solids, per gallon - - - - -	11.88

Free Carbonic Acid Gas, thorough saturation.

Proceedings of Societies.

THE ONTARIO MEDICAL COUNCIL PROCEEDINGS.

THE first session of the annual meeting of the Ontario Medical Council for 1902 was held in the Medical Building, Bay and Richmond Streets, on the afternoon of June 25th. The President, Dr. H. L. Brock, of Guelph, was in the chair, and all the members were present except Dr. Williams, of Ingersoll, and Dr. McLaughlin, of Bowmanville, who were detained at home by illness. Dr. Brock, in his address, said that all the important business of the Council would come through the various committees, and he would not refer to it. He simply mentioned the subjects of the Dominion Medical Registration, and the Dominion Medical Act, (which has been sanctioned by Parliament, and now awaits the endorsement of the Provinces), the conclusion of the South African war, and the great services rendered by the members of the medical profession and the medical contingents during the campaign. He regretted the absence through illness of Drs. McLaughlin and Williams, and expressed a hope that they would soon recover. Dr. Brock closed by asking the members to nominate his successor.

Only one name was submitted for the Presidency, that of Dr. W. J. H. Emory, of Toronto, and he was at once elected. He took the chair, and presided during the balance of the session. He thanked the members for their kindness, and referred in feeling terms to the illness of His Majesty the King. He was, he said, certain that all sincerely hoped and prayed that the efforts now being made to restore their Sovereign to health might, under the Providence of God, be successful. The other officers of the Council were chosen by acclamation as follows: Vice-President, Dr. J. A. Robertson, Stratford; Registrar, Dr. R. A. Pyne, M.P.P.; Treasurer, Dr. H. W. Aikins; Solicitor, Christopher Robinson, K.C.; Stenographer, Mr. Alex. Downey; Auditor, Mr. J. C. Patton; Prosecutor, Mr. Charles Rose. All the officers, with the exception of the Vice-President, belong to Toronto. A tribute was paid to Mr. Downey for his efficient work as stenographer during the year.

A standing committee, with Dr. Roome as Chairman, was appointed, and it reported, recommending the selection of the following: Registration Committee—Drs. Campbell, Powell, Hanly, Thornton, Stewart, McLaughlin, and Sullivan; Rules and Regula-

tions—Drs. Hanly, Barwick, Williams, Lane, and Vernon; Finance—Drs. Henderson, Douglas, Griffin, Brock, and Bray; Printing Committee—Drs. Barrick, Stewart, Macdonald, Powell, and Thorburn; Education—Drs. Moorehouse, Luton, Henry, Roome, Macdonald, Spankie, Geikie, Moore, and Britton; Property Committee—Drs. Thorburn, Britton, Campbell, Thornton, and Lane; Complaints—Drs. Griffin, Thorburn, Sangster, Glasgow, and Douglas.

Several reports of committees were submitted, and of these the communications from the Executive and Legislation Committees were adopted. The former gave a statement of the recent examinations, with a number of statistics. The Legislative Committee's report made reference to the provision in a statute of the Ontario Legislature, passed at the last session, that all regular practitioners in the Province should have an opportunity of voting at the next election of the Medical Council, regardless of whether or not they had paid their fees. The members, in discussing this clause, interpreted it to mean the practitioners who were in good professional standing. The report of the Board of Examiners was referred to the Education Committee. A report sent in by the Constitutional Committee proposed to relieve members from the payment of fees during their absence from the Province. It is to be discussed at a later session. Dr. Barrick gave notice that he would move that under the provisions of Dr. Roddick's Bill the legislation by the Canadian Medical Council shall be accepted for a like purpose under the medical laws of this Province.

Dr. Moore moved, seconded by Dr. Campbell, that Hon. Dr. R. L. Borden, Minister of Militia, be registered as a member of the College of Physicians and Surgeons of Ontario. Dr. Bray, while favoring the idea, questioned the right of the Council to adopt it, as Dr. Borden is a practitioner in another Province, and there is no inter-Provincial registration. All present favored the suggestion, and the question was finally referred to the solicitor for an opinion as to the legal right of the Council on the point.

SECOND DAY'S SESSION.

The report of the Discipline Committee of the Ontario Medical Council, which is always a document of more or less importance, was submitted to the Council at Thursday's session by Dr. Bray. The report dealt with the case of Charles A. Jones, M.D., of Mount Forest, against whom a complaint was lodged for shielding his son in the practice of medicine, the son not being registered, and asked that the matter be left with the committee for further consideration. The committee were relieved of the duty of dealing with the case of another out-of-the-city doctor, who was charged with having acted as agent for a quack medicine company,

owing to the recent demise of the accused. The committee also reported progress in its dealing with a few other cases brought to their attention, and upon which they will report later.

Dr. Macdonald introduced a by-law to provide for the election of territorial representatives. The by-law was given its first and second reading, and the third reading was deferred in order to permit of the nomination of returning officers for three of the divisions.

Dr. Campbell introduced a by-law providing for the election of homeopathic representatives. It was given its third reading, and passed.

At an earlier stage in the day the Council adopted this resolution: "The members of the Ontario Medical Council, in session assembled, desire to offer most respectfully their profound sympathy to their Sovereign, King Edward VII., and the Queen Consort and family, in his great and most dangerous affliction. They humbly pray that the Sovereign Lord and Disposer of all things may see fit to bless the efforts of those in attendance for his complete restoration to health and strength."

It was decided to cable the resolution to the King's private Secretary.

In reply to Dr. Sangster, it was stated by the President that it was intended to send voting papers to the profession to ascertain their views of the medical bill before the Legislature at the last session, whether they have paid their fees or not.

A motion by Dr. Campbell for a report on the advisability of provincial legislation recognizing the Dominion Council was passed.

Resolutions of sympathy were passed with Dr. Williams and Dr. McLaughlin, who are absent through illness.

Committee work filled in the balance of the day's business.

THIRD DAY'S SESSION.

The Ontario Medical Council intend prosecuting in a lively manner osteopaths, electric healers, and various others of the community whom the members of the Council consider in the category of quacks. This resolve was expressed after the report of the official prosecutor was received. Taken altogether, the third day's session was the most interesting business transacted by the Council for a long time.

The morning session was characterized by an exceedingly sharp debate, in which some of the doctors used language much plainer than, and doubtless every bit as forcible as, the ordinary parlance of the profession.

Matters were going along smoothly when the debate in question was precipitated by Dr. Brock submitting the following mo-

tion: That this Council place itself on record as considering that the Ontario Medical Act, as now constituted, should not be amended so far as the composition of this Council is concerned.

Dr. Brock explained that the motion was for the purpose of offsetting the attempts being made by some of the members of the Council to exclude college representation, and it was most desirable in the interest of the profession that this should be retained.

Dr. Sangster, who has put forth his strongest effort to secure the change referred to, stated that the Attorney-General held that a referendum should be submitted to the profession to test the general feeling as to the composition of the Council. "And they will condemn this resolution," said he. "When that resolution is voted upon we will demand the yeas and nays. We want the profession to know whose votes are perpetuating conditions existing in this Council. There are men here representing dead institutions."

Dr. Britton replied in defence of the motion. It was to the point. He took up Dr. Sangster as to the correctness of some of his details, and said: "If I had made such statements I would express regret for uttering such an infernal lie."

Dr. Sangster protested, but the remarks were let go. He went on to give a history of the differences existing between them on the matter, when he was interrupted by Dr. Britton, who contended that Dr. Sangster should be required to leave the room for what he had said. "However," said Dr. Britton, "I will not insist upon it. I want him to stay here and hear what I have to say." He then concluded his remarks, and argued that there was no reason why a referendum should be submitted to the profession.

Dr. Thornton thought the Legislature was perfectly competent to deal with the matter without their advice, and moved that the resolution be laid on the table.

Senator Sullivan deplored the unseemly words that had been exchanged, and worked himself up to heated indignation. "The malignity introduced into this debate by Dr. Sangster is most regrettable," he said. "What right has he to come here and vilify people? I am surprised that he was allowed to do so. Only a low, mean, degraded mind would make such statements."

Dr. Sangster objected to these remarks, and the Senator withdrew his insinuations, intimating that with him it was not a case of one old man electing another, as had been hinted.

Dr. Geikie likened Dr. Sangster to a wasp in a tent at a garden party, and also to the festive "skeeter," but they did not care for their hummings, and hummings, and stings. He pointed out that Dr. Sangster once favored college representation.

This Dr. Sangster denied, but Dr. Geikie stuck to his assertion.

After further discussion, the resolution carried by 20 to 3, the latter being Drs. Henry, Sangster, and Thornton.

On motion of Dr. Moore, seconded by Dr. Spankie, a committee consisting of Hon. Dr. Sullivan, Dr. Bray, and Dr. Moorehouse, was appointed to draft a resolution of congratulation to be sent by the Council to the Honorable Minister of Militia, Sir Frederick Borden, upon the recognition of his valuable services by the King.

A by-law fixing the annual fee towards the general expenses of the college at \$2 was passed.

At the afternoon session, Drs. Emery, Robertson, and Roddick were elected as the Executive Committee for the year.

A by-law was submitted exempting members of the profession from the annual assessment when absent from the province. The by-law was adopted.

Then followed the presentation of the report of Charles Ross, the prosecutor. The report reviewed in detail the work he had done during the year. The number of informations laid by him was 51; convictions, 37; dismissed, 9; withdrawn, 2; yet to be tried, 3; could not be served, 1; warned to cease practising, 2; left the country before they could be served, 9; after investigation, found there would be no case, 7; cases yet to be attended to, 1. Total, 71. The prosecutor recommended that the Council take steps towards effecting an amendment to the Medical Act, so that he could prosecute osteopaths, electric healers, etc., whom he designated as the worst class of quacks that could be turned loose upon the community, and yet under existing conditions he was powerless to put a stop to their depredations.

The report was adopted, and the Executive will deal with the suggestions contained therein.

The various committees of the Council went into session in the evening.

The Medical Council gave its unqualified approval to Dr. Roddick's bill in regard to Dominion Registration, and adopted the report of the special committee thereon by a unanimous vote.

Dr. Roome submitted the report of the committee on the matter, and Drs. Sullivan, Moorehouse, Moore, and Geikie afterwards spoke in most complimentary terms of the work just accomplished by Dr. Roddick in the interest of the medical profession in Canada. They regarded the bill as a step in the right direction, and spoke of it as the commencement of a new and prosperous era for the physicians of the country.

In order that the bill can be enacted in respective provinces it must be ratified by the Legislatures and the Provincial Medical Acts amended.

On motion of Dr. Powell, Ottawa, the special committee was

authorized to take the necessary steps to have the amendment in question made to the Ontario Medical Act.

Drs. Bray, Chatham; Moore, Brockville; Campbell, London; and Macdonald, Toronto, were appointed to constitute the Discipline Committee for the coming year.

At the opening of the morning session the following reply was read to the message of sympathy cabled the previous day:

"London, June 27th.

"Dr. Emory, President Ontario Medical Council:

"Many thanks for your telegram, which will be laid before the King. The Queen thanks you for your kind sympathy. His Majesty is progressing satisfactorily. KNOLLYS."

November, 1903, was fixed as the date for the opening of the next annual meeting.

The spring examinations were fixed for May 4, and the fall ones for the third Tuesday in November. The Examiners will be: Dr. H. B. Anderson, Toronto, Anatomy Descriptive; Dr. W. G. Anglin, Kingston, Theory and Practice of Medicine; Dr. R. N. Horton, Brockville, Midwifery, Operative and other than Operative, and Puerperal Diseases; Dr. A. Primrose, Toronto, Physiology and Histology; Dr. J. Olmstead, Hamilton, Surgery, Operative and other than Operative; Dr. W. Gunn, Clinton, Medical and Surgical Anatomy; Dr. Graham Chambers, Toronto, Chemistry, Theoretical, Practical, and Toxicology; Dr. J. W. Schooley, Welland, Materia Medica and Pharmacy; Dr. Ogden Jones, Toronto, Medical Jurisprudence and Sanitary Science; Dr. R. Ferguson, London, Assistant Examiner on Surgery; Dr. A. Haig, Kingston, First Assistant Examiner to Examiner on Medicine, Diseases of Children; Dr. S. H. Field, Toronto, Second Assistant to the Examiner on Medicine, Pathology, Therapeutics, and Bacteriology; Dr. A. E. Wickens, Hamilton, Homeopathic Examiner.

Dr. Sullivan had hardly recovered from the excitement at the meeting on the day previous, and asked that Dr. Sangster specify the doctors whom he intimated were sitting as members of the Council who had no right to do so. Dr. Moore would also like to hear him particularize.

Dr. Sangster, in reply, stated that he did not refer to either of those gentlemen in his remarks, but would refuse to specify. Dr. Emery, the Chairman, prevented any further discussion on the subject by calling upon other business. He regretted the acrimonious discussion that had already taken place.

The Property Committee then reported a recommendation that the present medical building, in which they were meeting, at the corner of Bay and Richmond Streets, be sold, and that a

site be purchased on which to erect a smaller building. The report was adopted.

The Examining Committee reported that there was no evidence upon which to proceed in the complaints against Dr. John Caruthers, of Little Current.

Dr. Bray, on behalf of the Discipline Committee, reported that Dr. William Forrest, against whom a breach of professional etiquette had been charged, had apologized for his conduct. Seeing that he had been ill-advised in a legal sense as to his conduct, the committee excused him. Council accordingly allowed his name to remain on the roll.

The Committee on Registration recommended that Sir Frederick Borden, Minister of Militia, be granted registration. The report was adopted. The committee could see no reason for reinstating Dr. H. E. Sheppard, who was disqualified for unprofessional conduct last year. Messrs. J. H. Kidd, Aekroyd, and Shaunnassy, who applied for concessions in regard to matriculation, will have to comply with the regulations. Rev. S. Smith was granted matriculation, subject to his passing of examinations in some subjects. W. E. Kergan was granted matriculation standing in his first year's course. P. H. Spaul, C. M. Stratton, and Rev. J. Carson, were granted matriculation.

The following who were serving in South Africa were granted their examinations: A. R. Farrell, M.D., J. A. Crozier, B.A., M.D., A. E. Burrows, Charles A. Barnes, J. K. Nevin, M.B., J. Gunn, James Henderson, E. Latta.

Committee work was afterwards transacted.

SATURDAY'S SESSION.

A prolonged discussion resulted in the Ontario Medical Council on Saturday morning on a proposal to substitute honor junior matriculation in arts for the departmental arts junior matriculation, the present requirement for those entering the study of medicine. The question was introduced by Dr. Moorehouse, in presenting the report of the Educational Committee.

Dr. Geikie took exception to the proposed change. He was in favor of a high standard of matriculation, but he considered they now had it. Their standard was ahead of that of England. It was sufficient that they should have a standard equal to that of England. If the proposal was carried through the Council it would be taken as placing a barrier round the profession. When it came before the Legislature it would be opposed and they would be "turned down" as they had been the last time. It was unwise to make such a radical move, as they were a dying Council in its last moments.

Dr. Sangster declared that the matriculation standard of the

Council at present was so low as to be beneath contempt. It was anywhere from 25 to 50 per cent. lower than it was five years ago. The argument that it was unwise to introduce such legislation, as the Council had only a short time to live, was very weak indeed. It was time something was done to place a higher barrier at the entrance to the course, when they considered the large number of students going through who were absolutely unsuited to the profession. The present matriculation standard, he declared, would not compare favorably with that of dentistry or pharmacy.

Dr. Campbell deemed it unwise to take such a radical step at such a late hour in the session. He moved that it be left over till next year.

Exception was taken by Dr. Britton to the statement of Dr. Sangster that the standard was not as high as for dentistry or pharmacy.

"Don't put words in my mouth that I did not use," interrupted Dr. Sangster.

It was finally explained that Dr. Sangster had said the Ontario College of Physicians and Surgeons matriculation would not compare favorably with that of dentistry and pharmacy, and Dr. Britton then proceeded to explain that on another occasion they had suggested raising the standard, and instead they had been politely requested by the Government to go back to their former matriculation. In addition they had to do other things which were anything but pleasant. As an instance, he would mention the fact that they were obliged to permit students to proceed with their primary course without taking their matriculation, being granted their primary standing on passing their matriculation. He wanted no lower standing. He wanted it higher, if possible, but he did not think it possible at present. He quoted Deputy Minister of Education Millar, to show that the proposed matriculation was too high a standard.

Dr. Powell called attention to the fact that the standard of the Quebec Council was higher than that of Ontario, and suggested that it would be wise to adopt a higher standard, rather than be obliged to when Dr. Roddick's bill was enforced.

Dr. Spankie favored the change, as did also Dr. Macdonald, Dr. Moorehouse, and Dr. Barrick.

Dr. Campbell's motion to lay the matter over till the next Council was lost, and then the clause in the report was put and carried, there being 16 yeas and 11 nays.

When the yeas and nays were being taken Dr. Sullivan refused to vote, and when informed by Dr. Emory that he had to vote unless the Council excused him, he said he guessed the safest way would be to vote "No." Then the laugh was on Dr. Emory, who had voted yea.

Drs. Geikie, Wm. Britton, A. A. Macdonald, and Dr. R. A. Pyne were appointed a committee to look after the establishment of an anatomical museum under the control of the Council.

Another recommendation making the medical course follow the arts course when both were taken, instead of permitting both to be taken at the same time, was carried after a lengthy discussion. This will make the course for students taking both arts and medicine last nine years instead of six as heretofore. A committee appointed to consider a request of Dr. Bryce to permit fifth year students to practise in isolated camps in the unorganized districts of Ontario, stated that the Council had no authority to act, and brought in no recommendation.

A. G. Herdon must take an examination in anatomy again.

The Committee on Legislation of last year was re-appointed.

Dr. Sangster rose to a question of privilege in connection with the discussion a few days ago, in which he alleged Senator Sullivan had questioned his veracity.

At the afternoon session, the Council gave its unqualified approval of Dr. Roddick's bill in regard to Dominion registration, the report of the Special Committee thereon being adopted by a unanimous vote.

The report was submitted by Dr. Roome, and Drs. Sullivan, Moorehouse, Moore, and Geikie afterwards spoke in most complimentary terms of the work accomplished by Dr. Roddick in the interests of the medical profession in Canada. The bill they regarded as the commencement of a new and prosperous era for the physicians of the country.

Before the bill can be enacted in the respective provinces it must be ratified by the Legislatures, and the Provincial Acts amended.

A special committee was appointed on a motion of Dr. Powell, of Ottawa, with the authority to take the necessary steps to have the amendment in question made to the Ontario Medical Act.

Drs. Bray, Chatham; Moore, Brockville; Campbell, London; and Macdonald, Toronto, were appointed a Discipline Committee for the coming year.

The Council soon after adjourned.

A Complete Laboratory.—One of the most splendidly equipped laboratories for chemical, physiological, pathological and bacteriological work in America is that of Reed & Carwick, in Jersey City, N.J. The firm will furnish the profession, in return for a very limited fee, with a laboratory report complete in every detail, and as of just an exacting a character as science will permit. We have glanced over one of their reports on urine analysis, and judging from it, feel that their work must be of a very high order.

THE CANADIAN MEDICAL ASSOCIATION.

THE Canadian Medical Association will meet this year in Montreal, on September 16th, 17th, and 18th. This time of the year has been selected by the local Executive Committee in order that all may avail themselves of the meeting, and it is expected that an unusually large number of members will be present.

To those who contemplate attending the meeting, the following facts will be of interest:

ARRANGEMENTS FOR TRANSPORTATION.

The following arrangements will be in effect for the meeting of the Canadian Medical Association and the Canadian Dental Association at Montreal, September 16th, 17th, and 18th, 1902:

In order to take advantage of these arrangements, it will be necessary for members to obtain from agent at starting point a Standard Convention Certificate, showing purchase of one-way first-class ticket to Montreal, between September 12th and 18th (both dates inclusive), which certificate will be honored on or before September 22nd, 1902, in Montreal, by ticket agent of the line on which they arrive, for ticket back to their original starting point when Certificate is endorsed by Secretary to the effect that delegate has been in attendance at the Convention, on following basis:

From Points South and West of Montreal.—If 300 or more attend, holding Standard Convention Certificates, they will be given tickets for return, free, to original starting point *via* same route as used to Montreal. If less than 300 (and more than 50) delegates are in attendance, holding Certificates, they will be given tickets for return to the original starting point *via* same route as used to Montreal, at one-third of the one-way first-class fare.

From Points West of Fort William.—Should special concessions relative to time-limit be granted, particulars will be announced later.

If 50 or more delegates are in attendance, holding Standard Convention Certificates, delegates from Toronto or Kingston travelling to Montreal by Richelieu and Ontario Navigation Co., may return *via* Grand Trunk or Canadian Pacific on payment of \$5.00 to Toronto, or \$3.25 to Kingston; delegates from Toronto or Kingston travelling to Montreal *via* Grand Trunk or Canadian Pacific, may return *via* Richelieu and Ontario Navigation Co. on payment of one-half the fare paid on going journey.

From Points East of Montreal.—If ten or more delegates are in attendance holding Standard Convention Certificates, delegates east of Montreal will be given tickets free for return.

Any further particulars may be obtained from the General Secretary, Dr. Geo. Elliott, 129 John Street, Toronto, or from the Chairman of the Transportation Committee, Dr. J. Alexander Hutchinson, 70 McKay Street, Montreal.

LOCAL ARRANGEMENTS.

The meetings will be held in the various rooms of the Medical Faculty of McGill University.

PROGRAMME.

There will this year be two sections of the Association, one mainly Medical, the other mainly Surgical. The Address in Medicine will be given by Dr. Wm. Osler, of Johns Hopkins University, Baltimore; that in Surgery by Dr. John Stewart, of Halifax.

In addition to this, on one or two days of the meeting, clinics will be held in the hospitals at such times as will not interfere with the general programme of the meeting, and will yet enable all those who care to do so to see or to exhibit living cases or specimens which may be of interest to the members.

PATHOLOGICAL MUSEUM.

The Museum will this year be one of the features of the meeting, and circulars have been issued by the Secretary of the Museum Committee, Dr. M. E. Abbott, announcing the intentions of the committee. Any contributions in the way of specimens will be gratefully received by the Secretary, and every care will be taken of specimens lent, and as soon as the meeting is over they will be repacked and reshipped to the owners by a responsible person. Specimens for the exhibition should arrive not later than September 6th. The Committee is desirous more particularly of obtaining series of specimens illustrating diseased conditions of the liver, gall-bladder, and pancreas. To all those who may not have received circulars containing details of the Pathological Exhibit, the same may be had on application to Dr. M. E. Abbott, McGill Medical College, Montreal.

The Museum of Commercial Exhibits, which is under the special charge of Dr. J. W. Stirling, 255 Mountain Street, Montreal, will be found in the most suitable part of the Medical Buildings, the space allotted therefor occupying one of the main halls of the building. Many applications have been received from various manufacturers and instrument dealers, so that a large and interesting exhibit is expected.

LOCAL COMMITTEES.

The Local Committees are as follows:

Executive Committee.—President, Dr. F. J. Shepherd; Vice-President, Dr. J. Alexander Hutchinson; Local Secretary, Dr. C.

F. Martin; Local Treasurer, Dr. J. G. McCarthy; Council, Drs. James Stewart, F. G. Finley, and J. M. Elder.

Reception Committee.—Sir William Hingston, M.D., Chairman; Dr. E. P. Lachapelle, Dr. F. W. Campbell, Dr. Robert Craik, Dr. T. G. Roddick, Dr. D. C. McCallum, Dr. R. F. Ruttan, Hon. Jos. Guerin, M.D., Dr. James Perrigo, Dr. J. P. Rettot, Dr. A. R. Marsolais, Dr. James Stewart, Dr. T. J. W. Burgess, Dr. W. Brodeur, Dr. J. E. Dube.

Entertainment Committee.—Dr. H. S. Birkett, Chairman; Dr. James Bell, Dr. C. W. Wilson, Dr. K. Cameron, Dr. J. W. Stirling, Dr. W. G. Stewart, Dr. J. A. LeSage, Dr. W. H. Drummond, Dr. H. B. Yates, Dr. W. W. Chipman, Dr. A. Laphorn-Smith, Dr. L. DeL. Harwood.

Programme Committee.—Dr. J. G. Adami, Chairman; Dr. F. G. Finley, Dr. A. DeMartigny, Dr. C. N. Valin, Dr. J. M. Elder, Dr. A. T. Bazin, Dr. J. E. Dube.

Transportation Committee.—Dr. J. Alex. Hutchison, Chairman; Dr. G. E. Armstrong.

Finance Committee.—Dr. H. L. Reddy, Chairman; Dr. Jas. Perrigo, Dr. W. A. Molson, Dr. D. J. Evans, Dr. F. R. England, Dr. S. Boucher, Dr. J. G. McCarthy, Dr. Wm. Gardner, Dr. W. F. Hamilton, Dr. L. J. V. Cleroux, Dr. G. Gordon Campbell.

Pathological Museum Committee.—Dr. Andrew McPhail, Chairman; Dr. Maude E. Abbott, Secretary; Dr. A. G. Nicholls, Dr. Wesley Mills, Dr. J. B. McConnell, Dr. A. Mereier, Dr. J. A. Springle, Dr. E. P. Benoit, Dr. A. Bernier, Dr. Rene Hebert, Dr. A. D. Blackader.

Exhibition Committee.—Dr. J. W. Stirling, Chairman; Dr. Ridley McKenzie, Dr. C. A. Peters, Dr. A. W. Haldimand.

PAPERS.

Some of the papers already promised are as follows:

Dr. W. Corlett, Cleveland—"Lantern Demonstrations on Exanthemata." Dr. J. O. Orr, "Artificial Astigmatism." Dr. C. A. Wood, Chicago, "Empyema of Frontal Sinus." Dr. P. G. Goldsmith, Belleville, "Management of Cases of Nasal Obstruction." Dr. J. F. MacDonald, Hopewell, N.S., "Tuberculosis." Dr. A. R. Robinson, New York, "X-Ray in Cancer." Dr. D. A. Shirres, Montreal, "Degeneration of Spinal Cord Associated with Anemia or other forms of Malnutrition." Dr. James Stewart, Montreal, "On Some Points in Cerebral Localization, Illustrated by a Series of Morbid Specimens and some Living Cases." Dr. A. Primrose, Toronto, "Case of Filariasis in Man, Cured by Operation."

Papers have also been promised by Drs. Armstrong, Ingersoll Olmstead, D. C. Meyers, G. S. Ryerson, F. A. L. Lockhart, and many others.

The Canadian Journal of Medicine and Surgery

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Medical Jurisprudence and Toxicology—ARTHUR JUKES JOHNSON, M.B., M.R.C.S. Eng.; Coroner County of York; Surgeon Toronto Railway Co., Toronto; W. A. YOUNG, M.D., L.R.C.P. Lond.; Coroner County of York, Toronto.

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Clinical Medicine—ALEXANDER MCPHEDRAN, M.D., Professor of Medicine and Clinical Medicine Toronto University; Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, and N. H. DEEMER, M.D., Mimico Insane Asylum.

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. XII.

TORONTO, AUGUST, 1902.

NO. 2.

Editorials.

SOME CAUSES OF TUBERCULOSIS IN ONTARIO.

THE Registrar-General of Ontario showed in his annual report for the year 1900, that the mortality from tuberculosis is higher in the cities of this Province than in the country districts. For instance, the mortality from tuberculosis per 1,000 of population at Toronto, in 1900, was 2.3, while in the County of York, in which Toronto is situated, it was 2.1. At Ottawa the rate was 2.3, while in the County of Carleton, in which Ottawa is situated, it was 2.2. At Windsor the rate was 2.3, and in the County of Essex, in which Windsor is situated, it was 1.4. At Brantford the rate was 2.4,

while in Brant County, in which Brantford is situated, it was 1.6. At St. Catharines the rate was 2.8, while in Lincoln County, in which St. Catharines is situated, it was 1.7. At Belleville the rate was 3.0, while in Hastings County, in which Belleville is situated, it was 1.7. At Kingston the rate was 3.1, while in Frontenac County, in which Kingston is situated, it was 2.1.

The contrasted figures show that causes are at work in the cities of this Province, which make the rates of mortality from tuberculosis higher in them than in the agricultural areas in their neighborhood. We shall not, in this article, make any special inquiries into, or offer any reasons for, this state of affairs, although our readers will doubtless agree with us that the more widely diffused sunlight and pure air of the country go far to explain the advantage possessed by the country over the city.

The opinion has been expressed by competent judges, that the structure of the rocks and the constitution of the soil of a large portion of the land bordering on the upper St. Lawrence River, and on the shores of the eastern half of Lake Ontario, exercise an influence in causing tuberculosis among the inhabitants of these parts of Ontario. The rocks are mainly of the Laurentian system, which, when level, permit the water to run off rapidly into creeks, etc., or else, owing to their foldings, retain it in numerous small basins. A large portion of the soil is a stiff clay, level in many parts. A clay soil is retentive of moisture, and when level, unusually so. The soil of eastern Ontario is, therefore, quite damp, unless where it has been drained. In certain places, also, as, for instance, near the rapids of the St. Lawrence, where the river does not freeze over in winter, the air is permanently damp. To illustrate the influence of a damp soil and a humid atmosphere in increasing the mortality from tuberculosis, the Registrar-General points to "Frontenac County, in which the tubercular rate of 2.1 is accentuated by the presence of Kingston, with the enormous rate of 3.1, while Leeds and Grenville has 2.3, and includes Brockville, with 2.2."

The Registrar-General might have added that the tubercular rate for York County, 2.1, is but little lower than that of Toronto, 2.3, and would go to show that a damp soil in the county so negatives the effects of bright sunlight and fresh air, that Toronto, which is a well-drained city, has nearly as low a tubercular mortality as York County, which must be very imperfectly drained.

Then, again, by noting the tubercular mortality rates of counties in Ontario, in which the soil is of a permeable character, one sees another side of the same problem. Thus, in Middlesex, where the soil is highly permeable, the mortality from tuberculosis is 1.4, and in London, its chief city, it is 1.8. In Wentworth County, where the soil has a limestone basis, the tubercular mortality is 1.9, and in Hamilton, its chief city, it is 1.8. In Wellington County, which has a limestone basis, there is a tubercular mortality of 1.2, and in Guelph, its chief city, 1.7. It is acknowledged by medical authorities that humidity of the soil and abundant atmospheric moisture increase the prevalence of tuberculosis. Osler says that "tuberculosis is especially common in regions where sudden variations of temperature or protracted cold with dampness prevail. This increase is associated with a heightened vulnerability due to an increased tendency to catarrhal affections of all kinds." Buchanan states: "It has been shown that proper drainage of marshy districts, has diminished to some extent the frequency of tuberculosis, and on the other hand mountainous districts, are often remarkable for freedom from the disease." In reference to the action of drainage in preventing dampness of the soil and lessening the mortality rate for tuberculosis, the Registrar-General says: "In both the Niagara and Essex Peninsulas, which in former years had abnormally high death-rates from consumption, extensive drainage works and improved agricultural conditions are exercising a slightly lessening effect on the mortality from phthisis.

The tubercular tendency on the part of the Indians of this continent, even in the most favorable climate, has been observed repeatedly, and the statistics of the Registrar-General go to show that it exists in Canada. Thus, the Garden River Indian Reserve reports a total mortality of 39 for 1901. Of these deaths, 14 were due to influenza, and 10 deaths to consumption. In the Manitoulin Island reserve, the total deaths from all causes were 38; the deaths from influenza 9, and from consumption 11. This means that out of 77 deaths in both bands, almost a third, or 31 per cent., were returned as due to consumption.

The negro race is also said to be highly receptive to tuberculosis. Rodman says: "Tuberculosis is more than twice as common in the African as in the white." Sears (*Boston Medical and Surgical Journal*, April 4th, 1895) found that, in 200 cases of

tuberculosis, nearly 50 per cent. belonged to the first and second generation of Irish immigrants.

There are no statistics available in this Province to enable us to test the relative prevalence of tuberculosis among negroes or the Irish. Perhaps the Registrar-General may institute some further inquiries to throw light on the question of nationality in the etiology of tuberculosis in Ontario,

J. J. C.

THE SEVERE ILLNESS OF HIS MAJESTY KING EDWARD VII.

AT page 101 of this issue we publish an article from the *Lancet*, London, Eng., descriptive of the recent severe illness of His Majesty King Edward VII. Needless to say, the high rank of the royal patient, as well as his many estimable qualities of mind and heart, have imparted a peculiar interest to the minutest circumstances of the ailment, which has so seriously menaced his life. At the present time it is pleasing to learn from the daily bulletins, and the accounts published in British medical journals, that complications of a disquieting nature are not feared, and that His Majesty will probably be restored to health, after the appendicular abscess from which he suffers has been healed.

In reference to the operation for the relief of abscess, which was performed on the King by Sir Frederick Treves, June 24th, at Buckingham Palace, the *British Medical Journal* says:

"The condition of the parts made clear at the operation is such as to assure the surgeons that the abscess was due to one of those unexplained inflammations, which are known to occur with remarkable frequency in the neighborhood of the vermiform appendix. It was not due to any organic disease of more serious nature, or to a malignant growth."

In his Cavendish lecture on some phases of inflammation of the appendix, which was delivered before the West London Medico-Chirurgical Society on June 20th, 1902, Sir Frederick Treves lays down his views as to the rules of treatment of the acute stage of appendicitis, as well as the treatment of a case in which an operation has been done for appendicular abscess, and the abscess has healed. Except in ultra acute cases, or cases in which suppuration has occurred, Treves is opposed to an operation

during an acute attack of appendicitis. He favors operation during the period of quiescence, stating that since 1887 he has removed the appendix during the quiescent period over one thousand times, with two deaths. He also says that "when any patient has had one definite attack of appendicitis, it is desirable that the appendix should be removed, as soon as all active phenomena have vanished."

He says, further, "If an attack has been attended by the formation of an abscess, which has healed, then the question of removing the appendix may be indefinitely deferred, since by the occurrence of suppuration the patient is—in all but a very small percentage of cases—cured of his trouble. Should there be any recurrence of symptoms after the abscess has closed, then the removal of the appendix is certainly to be advised. Complications arising from the abscess itself may also call for surgical interference."

Arguing from these premises, it is possible that, after His Majesty has recovered from his present illness, he may be troubled no further with abdominal disease proceeding from the appendix. Should there be a recurrence of symptoms after the abscess has closed, it is likely, from the opinion expressed, that Sir Frederick Treves would favor the removal of the appendix during the quiescent period.

J. J. C.

AN HONOR TO TRINITY.

TRINITY UNIVERSITY, honored itself in conferring the degree of D.C.L. on Dr. William Osler.

Canada has no greater son than William Osler. The University of Trinity College will never have a more distinguished graduate.

The career which has its windings in the quiet paths of human endeavor is not crowned with the gaudy laurels which wreath the brow of the soldier, the statesman, or the novelist who climbs the sunlit heights of fame.

Fame is not measured by the number of times that a name is mentioned per day. The horse jockey or the prize fighter revels in the glory of having his name on the lips of the multitude. The fame which endures is rooted in genius, and William Osler

has written his name high up among the kings in the realm of medical science.

It is an honor to the University of Trinity College to be associated with the name and fame of such a Canadian as Dr. William Osler.—*Telegram.*

EDITORIAL NOTES.

Medical Deontology.—In English-speaking countries questions coming under the heads of professional duties and etiquette are generally referred to as belonging to the domain of medical ethics. Recently, however, our French brethren have introduced a new term, "medical deontology" [Gr. *δεοντα*, things that ought to be done, *λογος*, treatise]. The science of professional duties and etiquette. A course of lectures on this subject was inaugurated in Paris in 1899 by Drs. Le Gendre and Lepage, and these have been recently published. In reference to specialists, Professor Grasset formulates what is said to be the generally received opinion in France, as follows: "The consultant's room is neutral territory, where advice may be given to all patients who seek it, whoever may be their medical attendant." As a modification to this dictum, the authors suggest that the specialist, or consultant, must not keep any patient, during the illness for which he has been called in consultation by the medical attendant. Upon the burning question of the patient changing his doctor, the authors maintain the absolute right of the patient to choose his medical adviser, and to change him when he pleases, but they consider that a medical practitioner should not undertake the care of a patient unless the former doctor's account has been settled. If, on account of the urgency of the case, it is impossible to postpone attendance, it is the duty of the supplanting physician to take care that the former medical attendant's account is settled before his own is paid. When, however, one medical practitioner supplants another in the course of a grave illness, such as typhoid fever, it is held to be the duty of the supplanter, in addition, to notify the former attendant of the fact, and it is suggested that this is best done by an interview ostensibly to obtain information about the patient's history. These views seem to be quite reasonable, and will probably commend themselves to most men. A practitioner has no right to feel displeased with a brother practitioner because he has taken some of

his patients. The doctor is the servant of the public, and the public choose whomsoever they please. All the same, doctors owe duties to their confreres as well as to the public.

Imprisoned in a Well for Ninety-Nine and One-Half Hours.—

On June 24th a well-digger named Joshua Sanford, owing to the collapsing of the brick casing of a well, at the Scott farmhouse, near Paris (Ont.), was imprisoned in the well for close on one hundred hours. In order to rescue Sanford, a shaft fifty feet in depth was made parallel to the well in which he lay. When on a level with the position occupied by the man, a tunnel was constructed from the shaft to the well, large enough to permit the passage of a man's body, and the first nourishment that he received in nearly eighty hours was given him. On Friday night, June 27th, it was found that his right leg was held tightly in a mass of brick, so that it could not be moved. A second tunnel three feet beneath the first one was put in and cased. The rescuers, John Carnie, William Hamilton, and Richard Doyle, introduced scantling through the lower tunnel, so as to support the weight of the mass of collapsed brick and sand surrounding Sanford's body, and then picked out the bricks, so that the imprisoned leg could be released without causing the mass of debris to fall lower down. Sanford's head was then lowered to the same level as his feet, and he was withdrawn from the well through the lower tunnel and carried up to the surface in a bucket at 5.30 Saturday, ninety-nine and one-half hours after the accident had occurred. After he had been placed in bed, he was examined by Drs. R. Dunton, Burt, Sinclair, and Loggie, of Paris, Addison, of St. George, and Stanley, of Brantford. They found that Sanford had suffered comparatively little during his incarceration, and long period of abstinence from food. There were a number of slight scalp wounds on his head, caused by falling bricks. There were wounds and bruises all over the body, and several contusions on the right leg, which anchored the man in the well, and around which a rope had been fixed in an effort to drag him out of the hole. This leg was apparently paralyzed, and this condition was expected to exist for some time. His speech was nearly normal. His pulse was 140, his temperature 98 F., and the respirations 44. The soundness of Sanford's physique may be estimated from the following colloquy, which took place after he had been carried to the surface and placed on a stretcher: "You're a brick, Carnie," said Sanford,

stretching out his hand to the man who had spent seventeen hours in the shaft. "Well, I may be a brick, Josh," said Carnie, "but you're the biggest brick in America."

Spitting on the Sidewalks Forbid Jen.—We notice in the June number of *The Sanitarian*, that the New York Board of Health, at its meeting, May 14th, amended its code, so as to forbid spitting on sidewalks. This amendment was made as a result of a letter from Dr. Herman H. Biggs, the medical officer of the Board of Health. In his letter, Dr. Biggs said: "A grave feature of the pollution of public places of assembly and public conveyances is the inevitable transmission of the always objectionable and dangerous material on the footwear, clothing, and particularly the skirts of women, into private houses, where it is a constant menace to the welfare of the occupants, whose attempts to maintain salubrious conditions are rendered futile. The action of the department, taken six years ago, has been productive of much good. There is still less excuse for spitting on the sidewalk than on the other places mentioned." The expectoration of the men, and the long dresses of the women are both at fault. Honors thus being even between the sexes in Gotham, on this question, it remains to be seen which of the two will appreciate the question of health in its true light, and yield a ready assent to the demands of an improved street hygiene. If the men would give up expectorating on the sidewalks, the women could more safely indulge their penchant for long skirts; but even if the modists do pronounce in favor of long skirts, ladies with small feet need not be too obdurate in adhering to the decrees of fashion. One of the most absurd scenes in street life is a citizen, in his Sunday best, walking along a sidewalk puffing at his cigar and occasionally expectorating, while his better half, who walks beside him, collects a percentage of the dust of the neighborhood on her trailing skirts.

Photo-Therapy in Small-Pox.—Dr. Barbary, of Nice, read a paper, May 20th, 1902, before the Academy of Medicine, Paris, on the treatment of smallpox by photo-therapy (Finsen's method) combined with a rigorous system of local and general asepsis and antisepsis. After the appearance of the disease in a patient, he is isolated in a room provided with window-panes of red glass, and red window-blinds. Lotions and sprays of sublimate for the body and the face, bathing the diseased parts with a lotion of salicylate

of sodium in alcohol and cherry-laurel water or a lotion of boracic acid, are also employed externally. The internal treatment consists of a mixture containing salol and hydrobromate of quinine in carbolized syrup. Dr. Barbary's cases, eight in number, all recovered. The fever disappeared rapidly, there was no suppuration, complications did not supervene, and the disease ran a rapid course. After desquamation, the faces of his patients were not pock-marked. This is, of course, very interesting reading, and if the mildness of the smallpox observed by Dr. Barbary could be logically traced to the therapeutic exhibition of red light and antiseptics, one or the other, or both together, Finsen's method of treating smallpox should be regarded as a great discovery. For the last three years variola has prevailed in Canada, but so mild is the disease, that the ensuing mortality is about 1 per cent., and pitting of the skin is not observed in the survivors. There is but little suppuration, complications do not supervene, and the disease generally runs a rapid course. The type of the disease is mild, and the successful results, as far as the patients are concerned, are not thought to be due to the methods of treatment pursued by the attending physicians.

The Bacteriology of Scarlet Fever.—At a meeting of the Society of the Hospitals, Paris, May 2nd, 1902, Drs. Variot and Roy presented a statistical report, in which they offered some views as to the bacteriology of the sore throat of scarlet fever. In their opinion this form of sore throat is not due to one bacterium, but to several different kinds of bacteria. They also thought that sore throats in scarlet fever were often of a diphtheritic nature, but that these diphtheritic sore throats do not call for a gloomy prognosis. It also appears, according to their views, that the temperature curve in scarlet fever varies in a direct proportion to the intensity of the sore throat. All of which is of great interest to the clinician, illustrating as it does the necessity of devoting great attention to the rhino-pharynx of a patient suffering from scarlet fever.

As It Ought to Be.—At a session (June 27th) of the annual meeting of the College of Physicians and Surgeons of Ontario, the report of the special committee appointed to consider Dr. Roddick's Dominion Registration Bill, was presented by Dr. Roome. The committee heartily approved of the Bill, and recommended that the necessary steps be taken to secure the passage of the Bill

through the Ontario Legislature. The Council added to the resolution adopting the report a message of congratulation to Dr. Roddick, which was at once telegraphed to him. Several members spoke in the warmest praise of Dr. Roddick's good work in connection with the Bill, and the resolution was finally adopted by a standing vote, with three ringing cheers.

J. J. C.

Our Coronation Number.—It has been a source of the greatest satisfaction to us to have received from, not only all parts of Canada, but the Mother Country as well, letters congratulating us upon our June number, which had in it one or two special features in connection with The Coronation of our Rightful Sovereign, King Edward the Seventh. It is always pleasant to receive letters of this kind, and we wish to take this opportunity of thanking our rapidly widening circle of friends for this repeated mark of their approval, and to say that we regretted extremely our inability to supply the large demand for additional copies of the Coronation number. It is not often that a medical journal is honoured by receiving letters from members of the Royal Family, but during the past few weeks we have been in receipt of letters of acknowledgment from the private secretaries to His Majesty, King Edward VII., and H.R.H. the Prince of Wales, both expressing their pleasure at receiving the Coronation number of the Canadian Journal of Medicine and Surgery, and thanking us for the loyal sentiments therein contained. We may say that we also received kindly worded letters from the Hon. Jos. Chamberlain, the Hon. Lord Salisbury, and Lord Stratheona.

W. A. Y.

PERSONALS.

DR. E. LELIA SKINNER has removed to 40 Carlton Street.

DR. RODDICK has resigned his connection with the *Montreal Medical Journal*.

DR. W. H. LOWE, of Toronto, is now in England, but will return this month.

DR. GEORGE E. MILLICHAMP begs to announce that he has moved from Church Street to 49 Carlton Street.

We beg to acknowledge the reproduction by us, of the illustrations of The King's Surgeons from *The Illustrated London News* appearing in this issue.

DR. CRAWFORD SCADDING, we understand, intends purchasing an electric carriage.

DR. A. J. HARRINGTON expects to move into his new house on Bathurst Street about October 1st.

DR. J. J. CASSIDY and his family are summering at their country house, "Sanitas," at Long Branch.

DR. R. A. PYNE will retain his seat as member in the Ontario Government for East Toronto. The protest "did not work."

DR. T. M. ARMSTRONG, coroner of the county of Simcoe, and for several years Mayor of Alliston, has taken up his residence in Toronto.

THE Ontario Medical Council, to their credit be it said, unanimously endorsed Dr. Roddick's Bill, which recently passed the Senate at Ottawa.

DR. J. M. MACCALLUM has decided not to take his proposed trip to England this summer after all, but has been "holidaying" in St. Catharines and elsewhere.

DR. J. ALGERNON TEMPLE, of Simcoe Street, has sold his residence and will build on Bloor Street West, near Huron Street, whither he will remove in a few months' time.

DR. ROBERTS, of Bloor Street, returned two weeks ago from South Africa, whither he went as Surgeon to the Field Hospital Corps, who went out to that far country about three months ago.

MR. F. M. TUCKETT, President of the Ferrol Co., whose headquarters are at Markham, and who has done such effective work in the establishing in Canada of Ferrol as a medicinal preparation of merit, left a few weeks ago for London, England, where he expects to remain for the better part of one year. Mr. Tuckett has made for himself in this country a reputation as a good, honest pharmaceutical manufacturer, as from the first he promised that Ferrol should be maintained as a strictly ethical preparation, and should be advertised solely to the medical profession and by the medical press alone. This he has, in spite of considerable up-hill work, carried out to the letter, and he deserves credit for doing so. Mr. Tuckett will establish, while in London, the Ferroleum Co. of London, England, and will place his preparation upon the market in the Old Land. We wish him every success in his labors, and feel that, if he carries out, as doubtless he will, the policy established in this country as to the methods of introduction, etc., his success is assured.

Items of Interest.

Heard at the Church Door.—Mrs. Nostrumeater—Oh dear! I do so wish this rheumatism of mine would go. Why, would you believe it, my limbs feel like wood to-day. Mrs. Lacktender—Too bad! does your head ever get that way? Mrs. Nostrumeater—Oh, no, thank heaven! it hasn't got that far yet.

St. Michael's Surgeons.—The vacancy on the staff of St. Michael's Hospital created by the death of Dr. Sweetnam has been filled by the appointment of Dr. Uren. Dr. Uren moved to the city from Acton some three years ago to accept the position of assistant surgeon at St. Michael's. The doctors of the house staff for the coming year will be : Dr. Colling, Toronto; Dr. S. Doherty, Eglinton; and Dr. Wainwright, of Orillia.

House Surgeons at Toronto General Hospital.—The following graduates in medicine from Toronto and Trinity Universities, and members of the College of Physicians and Surgeons of Ontario, have been appointed resident house surgeons at Toronto General Hospital for the year 1902-3 : Toronto University—J. D. Chisholm, Berlin; T. R. McCollum, Hamilton; A. B. Rutherford, Owen Sound; P. W. Saunders, Toronto. Alternates—D. Lancaster, Toronto; and G. Davies, Cayuga. Trinity University—C. R. Elliott, Toronto; S. Johnston, Toronto; R. Neil Kyles, Canilla; W. H. Lohry, Guelph; R. Parsons, Emery. Alternates—S. J. Farrell, Toronto, and G. B. Jamieson, Barrie.

The Late Robert J. Gunn, M.D.—Dr. Robert J. Gunn, of Whitby, died at his residence on June 24th, in his eighty-ninth year. The deceased was a native of Caithness, Scotland, and an L.R.C.P., Edin. He settled in Whitby in 1849, and had continuously resided here from that date. Dr. Gunn filled a large place in the public life of this country for many years. He was Mayor of the town on several occasions, and jail surgeon for thirty years. He was a genial, kind-hearted man, and upheld the best traditions of his profession, to which he was an ornament. He retired from active practice a few years ago, and spent his declining years in his adopted town, where he was regarded with great respect, and where notice of his death is received with universal regret. He was a staunch Conservative, and a Presbyterian. He is survived by his widow and two daughters, Mrs. John Ball Dow, of Whitby, and Mrs. Angus McKay, of Indian Head, N.W.T.

Doctor's Carriage for Sale.—A four-wheeled, platform-gear dogcart, built by Hutchinson & Son, of Toronto, cost originally \$425, newly painted, and in first-class order, for sale for \$150 cash. Apply at once, Box 47, office of *The Canadian Journal of Medicine and Surgery*, Toronto. This is a great snap.

Changes in Asylum Staff.—Dr. McNaughton, assistant physician at the Asylum for the Insane, Mimico, has been transferred to the London Asylum to succeed Dr. Wilson, who has been transferred to the Hamilton Asylum. Dr. St. Charles, of the Hamilton Asylum, takes Mr. McNaughton's place at Mimico. These transfers will take place about the first of August.

Mortality Among Clergymen Greater Than That Among Soldiers.—An English authority says that under favorable conditions of peace, the mortality among soldiers is practically the least known, with a death-rate of only five in every one thousand. Compared with a soldier's life, the placid days even of a clergyman are full of danger, for his death-rate is eleven in one thousand, or more than twice as great as that of his militant brother.

A Race Who Do Not Intermarry.—It is extremely rare to find a race keeping to itself and not intermarrying with its neighbors, yet this is the case in at least one part of England, according to a statement in *Health*. At Brandon, on the borders of Suffolk and Norfolk, there is a race, living by itself, marrying only members of its own kind, whose characteristics are as different from those of the surrounding peoples as is night from day. Their origin is lost in antiquity, and they are believed by some to be the last remnant of prehistoric man. They are probably the only people that still work in flint, and they have carried on this trade from time immemorial.—*Medical Times*.

The American Congress of Tuberculosis.—At a meeting of the American Congress of Tuberculosis, held in New York, June 3rd, 4th, and 5th, a reorganization was effected, and the following officers elected for the ensuing year: Honorary President, Dr. Henry D. Holton, Brattleboro', Vt.; President, Dr. Daniel Lewis, New York, N.Y.; First Vice-President, Dr. J. A. Egan, Illinois; Second Vice-President, Dr. Frank Paschal, San Antonio, Texas; Third Vice-President, Dr. E. J. Barrick, Toronto, Canada; Fourth Vice-President, Dr. J. A. Watson, Concord, N.H.; Fifth Vice-President, Dr. Romola, Guatemala; Secretary, Dr. George Brown, Atlanta, Ga.; Treasurer, Dr. P. H. Bryce, Toronto, Canada.

The suggestion to hold a World's Congress of Tuberculosis in St. Louis in 1904, met with approval, and steps are being taken to advertise this fact, and secure the aid of medical journals, societies, physicians, and scientists in making this movement a grand success.

The International Congress of Medicine.—The fourteenth International Congress of Medicine will be opened at Madrid, Spain, on April 23rd, 1903, and will close on the 30th of the same month. So far, no committee has been appointed to represent Canada. Dr. Abraham Jacobi, of New York, has been appointed president of the committee for the United States, and Dr. John H. Huddleston, also of New York, secretary. The *Montreal Medical Journal* (April, '02), announces that Dr. Shepherd, President of the Canadian Medical Association, has been invited by Dr. Jacobi to take a place as a member of the American committee of the Spanish Congress, and that he has accepted the invitation.

Trinity Medical College.—The Faculty of Trinity have every reason to expect a most successful winter session, commencing next month. They have this year made arrangements for special courses of lectures in the final subjects, in addition to the ordinary lectures hitherto given in the College. This should prove most advantageous and a special attraction to students. The Faculty are also refitting the primary lecture-room, and many of the old desks embellished with the initials of members of the profession long since become famous, will disappear in the work of reconstruction. The lecture halls are also undergoing general repair, so that the old institution will, at its opening in a few weeks hence, present a new and fresh appearance.

Toronto's Medical Health Officer.—The City Council not long ago certainly acted most wisely in making an addition to the salary of our able Medical Health Officer, Dr. Charles Sheard. There is no question about it, that Dr. Sheard has proven himself to be the best Health Officer Toronto has ever had, having coped with almost every phase of municipal health matters, and always "come out on top." The members of the profession, who have occasion to call and interview the Doctor, are invariably treated with courtesy and kindness. Woe betide, however, an alderman who shows a disposition to interfere unduly with what does not come within his sphere, as far as the city Medical Health Department is concerned. He may get his toes trodden on, and rightly so. Dr. Sheard's independent manner towards some such city father is one of his best points.

Urotropin.—Golze and Gottlieb (*Prager medicinische Wochenschrift*, August, 1901, from *Treatment*, Vol. V., No. 8, 1901) have arrived at certain interesting conclusions with regard to this drug. 1. It is a powerful antiseptic, its bactericidal power being greatly increased by heating to body temperature. 2. The presence of albumen does not interfere with its antiseptic properties. 3. *Bacillus typhosus* seems to be particularly sensitive to the action of urotropin. 4. Uric acid concretions are dissolved by its action.

5. Given internally in 7-grain doses the drug is well borne (this dose may be safely increased to 10 grains three times a day), and does not irritate the bladder. In a case of uric acid calculus small clay-colored masses of uric acid were passed which were softer than those voided previous to the administration of the drug. It appears, therefore, that urotropin is a thoroughly trustworthy intestinal, as well as a urinary antiseptic, and may be used advantageously for this purpose, especially in typhoid fever.

New Science Course Adapted for Students Proceeding to the Degree in Medicine in Toronto University.—The special attention of students entering medicine is directed to the recent enactment of the University Senate instituting a New Curriculum in Science leading to the degree of Bachelor of Arts. This course is specially adapted for students who intend entering eventually upon medicine, and embraces the purely science subjects which are demanded of students in the primary years of medicine. This new curriculum is so arranged that at the completion of the Fourth Year in the Arts Course the student has already fulfilled the requirements of the first two years in medicine. It will therefore be possible in the future for a candidate who has thus obtained his Arts degree to enter in the Third Year of medicine, and he will be qualified to present himself for the degree of Bachelor of Medicine two years after graduating in Arts. In other words, it is possible for one to obtain the degrees of Bachelor of Arts and Bachelor of Medicine after six years study at the University.

The very great advantages of this course to a student entering medicine are obvious. The preliminary science subjects of the course in Medicine are taught in much greater detail in the science course in Arts, as in the latter is included advanced laboratory and experimental work, such as is not required in the purely medical course of studies. Further, the student is required to become proficient in modern languages, an acquirement which is of great value to the student of modern scientific medicine. This new course not only affords opportunity for wider culture and greater scientific attainment than is possible in the more limited four years' course in medicine, but it fits one for a much wider field of usefulness after graduation. The graduate who has taken the Science Course in Arts, and subsequently that of Medicine, is qualified to devote his life to the purely scientific side of medicine if he should so elect after leaving the university, and moreover, he is undoubtedly better fitted to practise his profession should he desire to qualify for that alone.

For details regarding the Science Course in Arts, the student is referred to the university calendar, or he may obtain a copy of the curriculum of study by application to the Secretary of the Faculty of Medicine.

The Physician's Library.

BOOK REVIEWS.

The Diagnosis of Surgical Disease. By DR. E. ALBERT, late Director and Professor of the First Surgical Clinic at the University of Vienna. Authorized translation from the eighth enlarged and revised edition, by ROBERT T. FRANK, A.M., M.D., With 53 illustrations. Pp. 419. New York: D. Appleton & Co. 1902.

This work is well worth a place on the book-shelves of the general practitioner, but its value will be most appreciated by the surgeon, and more particularly by the surgeon who is engaged in clinical teaching.

The author has compiled a most attractive series of chapters on Surgical Diagnosis. The first few pages of the book, for example, deal with "The Causes of Abnormal Positions of the Head," and clinical cases are noted to illustrate mal-position of the head from various causes, such as muscular weakness induced by supporting the head in fixed positions in different occupations; mal-position of the head in fractures, dislocations and contusions, and the characteristic attitude assumed in cervical caries due to tuberculous disease. It occurs to the reviewer that the author might have made some useful addition to his list of such cases by including wry neck and analogous conditions, whilst citing the commoner causes of the deformity with which the chapter deals.

The book is constructed to demonstrate the diagnosis of various surgical conditions affecting different parts of the body, and it is thus what might be termed a work on regional diagnosis. Thus the region of the head is completed, after consideration of the subject matter of the chapter referred to above, by chapters on Injuries to the Skull and Brain; Inflammatory Complications following Injury to the Skull; Tumors of the Skull; The Face—Trigeminal Neuralgia; The Orbit, Nose, and Frontal Region; Diseases of the Maxillae, etc. The author then proceeds to discuss Surgical Affections of the Extremities and of the Neck, Thorax, and Abdomen.

The work is by no means exhaustive, but it will prove exceedingly useful as far as it goes, and is written in a most attractive manner. Numerous cases are cited in a concise and clear style, so

as to illustrate in a vivid manner the points which the author wishes to impress upon his readers. The volume, therefore, well fulfils the purpose for which it was written in presenting to the practitioner and the student the problems in diagnosis which confront them at the bedside. We have much pleasure in recommending this useful book, and we feel sure it will be appreciated by the profession.

A. P.

The Practitioners' Manual. A Condensed System of General Medical Diagnosis and Treatment. By CHAS. WARRENNE ALLEN, M.D., Consulting Genito-Urinary Surgeon to the City (Charity) Hospital; Consulting Dermatologist to the Randall's Island Hospital, to the Hackensack Hospital, to the Bayonne Hospital, to the Infant Asylum of the Holy Rosary; Professor of Dermatology at the New York Post-Graduate School, etc. Second Edition, revised and enlarged. "Qui bene dignoscit bene curat." New York: William Wood & Co. 1902. Canadian Agents: The Chandler & Massey Limited, Toronto and Montreal.

Let "Allen's Manual for Practitioners" act as a beacon light to medical writers as a body. Let those thus desirous of disseminating medical lore take this book as an example, so that in future, it may be, general practitioners will, in purchasing books to which they look for help in their every-day work, be able to secure something distinctly practical, and which will give them what will most benefit them from day to day.

It is with a great sense of pleasure that we glance over Dr. Allen's second edition, as we find in every page, almost, material that is crisp, snappy, and up-to-date, and what is best of all, not verbose. It is, in short, a system of medicine boiled down and condensed.

W. A. Y.

Self and Sex Series. For Men. By SYLVANUS STALL, D.D. (1) "What a Young Boy Ought to Know." (2) "What a Young Man Ought to Know." (3) "What a Young Husband Ought to Know." (4) "What a Man of Forty-five Ought to Know." *For Women.* By MRS. MARY WOOD ALLEN, M.D. and MRS. EMMA F. A. DRAKE, M.D. (1) "What a Young Girl Ought to Know." (2) "What a Young Woman Ought to Know." (3) "What a Young Wife Ought to Know." (4) "What a Woman of Forty-five Ought to Know." Price, \$1.00 each. Toronto: William Briggs, 29-33 Richmond Street West.

While these books have been written for non-medical readers, yet they throw much needed light upon subjects that the medical practitioner is called to deal with constantly, and upon which he may profitably consult this excellent series.

It is chiefly, however, to the persons named on the title pages that they come freighted with instructions and advice, not only safe, but valuable. Medical practitioners are the chief official guardians of the physical well-being of the people, and know well that there is no agency so prolific of suffering and irremediable injury to the body and its health as vice. Unfortunately many of the semi-medical books written for the laity are non-scientific and entirely unworthy of confidence. This charge will not hold as against the books of this series. For young people who are to be kept free from vice the part of safety lies not in the way of ignorance, but in scientific instruction as to the physiology, the capabilities, the right use of and proper care of the body.

There have crept in some statements which detract; for example, "that a child conceived when either parent was in a state of intoxication is likely to be an idiot." This, though often stated, does not bear the hall-mark of scientific accuracy.

Every book of the series may confidently be recommended to parents and teachers, and to the separate persons for whom written, as containing the very best statement of the important information which should be supplied to every young man and woman, every boy and girl, entering upon the duties and responsibilities of life.

B. E. M.

Progressive Medicine. Vol. II., June, 1902. A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by ROBERT AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 440 pages, 28 illustrations. Per volume, \$2.50, by express, prepaid to any address. Per annum, in four cloth-bound volumes, \$10.00. Philadelphia and New York: Lea Brothers & Co., Publishers.

The contributors to Vol. II. are: John G. Clarke, M.D., William B. Coley, M.D., Edward Jackson, M.D., and Alfred Stengel, M.D. Even those who are well read in modern gynecological literature may find that some novel device, often an improvement, has escaped their observation, so that a perusal of Dr. Clarke's article will give fulness of contour to their reading. The latest advances in technique are referred to, and new views on gynecological pathology noted.

Physicians interested in the surgery of the abdomen will find the subject well put by Dr. Coley. Though brief, his article on hernia is valuable. He gives his own statistics of the operation for the radical cure of hernia, and also those of the great French surgeon, Lucas-Championiere. His criticism of the living suture used by Dr. McArthur in his operation for the radical cure of hernia is favorable. In Dr. Stengel's reference to pernicious anemia Dr. McPhedran's name is frequently quoted as "Me-

Phædran." Dr. McPhedran's paper on "Pernicious Anemia" was read at the meeting of the Association of American Physicians, Washington, May, 1901, and first published in the CANADIAN JOURNAL OF MEDICINE AND SURGERY, December, 1901.

The article on ophthalmology, while principally of value to the specialist, will also be suggestive to the general practitioner. Several useful illustrations are scattered through the volume. A most useful digest.

J. J. C.

Practical Medicine Series of Year-Books, comprising ten volumes on the Year's Progress in Medicine and Surgery. - Issued monthly. Under the general editorial charge of GUSTAVUS P. HEAD, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. VI., General Medicine, edited by FRANK BILLINGS, M.S., M.D., head of Medical Department, and Dean of the Faculty of Rust Medical College, Chicago. With the collaboration of S. C. STANTON, M.D. May, 1902. Chicago: The Year-Book Publishers, 40 Dearborn Street. Price of this vol., \$1.50.

The first volume of this series was published in October, 1901, on General Medicine. This volume included all the general diseases except those of the alimentary tract, and those diseases which would be more seasonably presented in the spring and summer months. The May volume, which is to hand now, completes the year's work in general medicine, taking up the subjects above indicated. The selections from current literature on typhoid and fevers like typhoid, but not giving the Widal reaction, are very full, and form a very valuable compilation. Gastro-intestinal affections occupy a large part of the work. The volume contains 271 pages, including an index. It is conveniently arranged, is up-to-date, and will form a useful addition to the year's literature.

W. J. W.

The Surgery of the Rectum. By CHARLES B. KELSEY, A.M., M.D., late Professor of Pelvic and Abdominal Surgery at the New York Post-Graduate Hospital, and Professor of Rectal Surgery at the University of Vermont. Sixth Edition. Illustrated by 215 engravings. New York: William Wood & Company. Toronto and Montreal: Chandler & Massey Limited.

Kelsey's work on "The Surgery of the Rectum" is so well known, and has been so favorably received by the profession, that it requires no recommendation. The sixth edition has been entirely re-written. The author states that in it he has tried to present the surgery of the rectum as it appears to him after twenty-five years of practice. The first chapter deals with examination of patients and diagnosis. The author states that, "To one unaccustomed to the examination of patients suffering with disease

of the rectum or pelvis, the diagnosis is surrounded by many imaginary difficulties." He also states that, "The secret of successful diagnosis of these diseases consists in taking nothing for granted. Every affection of the lower ten inches of the bowel, and most of those of the other pelvic organs, can be either seen or felt, if the practitioner will only take the necessary trouble to go about it in the proper way. The man who fails to detect the nature of a rectal trouble is generally the one who has either refused to employ the necessary and yet simple methods by which alone a diagnosis can be reached, or else has not sufficient skill and experience to interpret the physical conditions found." The author's methods of examining his patients are fully described in this chapter. Subsequent chapters deal with the various diseases of the rectum. The one on hemorrhoids is especially interesting, and will be found very satisfactory to the general practitioner. Several methods of treatment for internal hemorrhoids are described, but Kelsey himself prefers the clamp and cautery in most cases. The latest edition of this most excellent work is sure to meet with the cordial reception which it so well deserves.

A. E.

Jacobson—the Operations of Surgery. By W. H. A. JACOBSON, M.Ch. Oxon., F.R.C.S., Surgeon to Guy's Hospital; Consulting Surgeon Royal Hospital for Children and Women; Member Court of Examiners Royal College of Surgeons, etc.; and F. J. Stewart, M.S., Lond., F.R.C.S., Assistant Surgeon Guy's Hospital and to the Hospital for Sick Children; Surgeon in charge of the Throat Department, Guy's Hospital. Fourth Edition, Revised, Enlarged, and Improved. 550 illustrations. Two Volumes. Vol. I.: Operations on the Upper Extremity; Operations on the Head and Neck; Operations on the Thorax. Vol. II.: Operations on the Abdomen; Operations on the Lower Extremity; Operations on the Vertebral Column. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1902.

Upon opening this new Jacobson, the first thing that strikes one is the large number of new illustrations, so helpful toward a perfect understanding of the text. It is impossible to go fully into a description of this fourth edition in the space allotted, but a few of the points that strike one may be enumerated. The portion dealing with mastoid disease is much more exhaustive, as well as the whole subject of cranial surgery. A more complete description of the various operations on the uterine appendages is given, as well as on the uterus, vaginal hysterectomy being dealt with in such a manner as to make the literary "gynæpods" jealous.

Several additional pages are given to operations on the stomach. Beraud's operation for tumors of the nasopharynx is given. In addition to the Davies-Colley and Fergusson operations for cleft palate, described in the last edition, Lane's is here described.

The work is not only a useful guide for the general surgeon, but should be in the hands of every house surgeon and senior student going off by himself to locate in some place where he must be on the alert for every kind of surgical emergency. We congratulate the publishers on the bookmaking, though we shall miss the old "fat" volume of the former editions.

Encyclopedia Medica: Under the general editorship of CHALMERS WATSON, M.B., F.R.C.P.E. Volume X., pp. 576. Pregnancy to Scarlet Fever. Edinburgh: William Green & Sons. 1902.

This volume maintains the high standard of its predecessors. Pregnancy and Puerperium are each discussed in several articles by as many writers. The Pulse is the subject of a long and interesting article by H. Oliphant Nicholson, of Edinburgh. This contribution is worthy of careful perusal, as it contains much that is instructive and not too well known to physicians generally. The articles on rheumatism are very good, as they should be in a country where the disease is so prevalent. Rubella and scarlet fever are discussed by Clement Dukes, of Rugby, who has differentiated from measles and these two diseases an eruptive fever which he designates the "fourth disease." Diseases of Rectum, by Allingham, is good, as are many others of the shorter articles. The work of the publisher leaves nothing to be desired. A. M'P.

The Principles of Bacteriology. By A. C. Abbott, M.D. Sixth edition. Philadelphia: Lea Brothers & Co.

It is hardly necessary to again review this well-known textbook which in the present edition has been thoroughly revised and brought up to date by the author. A student who works carefully through Prof. Abbott's book will have had the best possible grounding in bacteriology.

This new edition contains a chapter on the acid proof bacilli related to the bacillus of tuberculosis, the study of which has broadened so much our knowledge of the tuberculous process. The chapter on infection and immunity has a welcome addition in a discussion of Ehrlich's recently published views on immunity.

J. J. M'K.

Neurological Technique. By IRVING HARDESTY, Ph.D., the University of Chicago Press.

This is a book which will be found very useful by all workers at Neurology. It contains a concise and well-written account of all the best methods of studying the central nervous system. The fact that it has a preface by Prof. Donaldson is a sufficient guarantee of its value.

J. J. M'K.

The Care of the Teeth. By SAMUEL A. HOPKINS, M.D., D.D.S., Prof. of Theory and Practice of Dentistry in Tuft's College Dental School. New York: D. Appleton & Co. 1902.

Doctors will find lots of good practical common sense as applied to the teeth and their care in Dr. Hopkins' little work, and the price charged for it is very trifling.

Horse Show Monthly. \$1.00 a year. A Journal of Society and the Horse. All the news of the high-class show-horse and his owner. Beautifully illustrated. Send for sample copy. 606 Bank Commerce Building, St. Louis, Mo.

Parke, Davis & Co.'s 1902-3 Price List.—We are in receipt of this live firm's price-list for 1902-'03, and have looked it over with considerable satisfaction. It is, to say the least of it, most complete, and might almost be termed elaborate. It contains "a complete catalogue of the products of the laboratories of the firm named, and is brim full of information on practical pharmacology. A copy has been mailed, we are informed, to every physician and druggist in Canada; but if for any reason it has not been received, it will be sent "for the asking."

Messrs. P. Blakiston's Son & Co., of Philadelphia, announce that they intend issuing from this date a small pamphlet, to be called "The Medical Book News," a bi-monthly publication devoted to the literature of medicine, and the allied sciences, containing lists of new books, reviews taken from prominent periodicals, occasional criticisms, and news items. The object of the "Medical Book News" is to furnish information of use to medical men in selecting and purchasing books on medicine and the allied sciences. This branch of literature has become so voluminous that the time now seems opportune for the issuing of a periodical devoted to it. The Medical Book News will include: Descriptions of Important Books, Reviews from Medical Papers, News Items, Lists of the most recent American and English Books of all Publishers, Lists of New Books on Special Subjects, Announcements of Forthcoming Books. There are many books, and a large number of special monographs of the greatest scientific merit published by other than regular medical publishing houses, but which are never brought before the average book-buyer, who is dependent almost wholly upon the catalogues and advertisements of individual publishers, and who has, therefore, no opportunity to compare relative values. The lists of new books, as given in the "Medical Book News," will include, as far as possible, all such books, as well as the more important treatises. Every effort will be made to furnish this information promptly, authoritatively, and in interesting and attractive form.

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF
MEDICINE AND SURGERY

VOL. XII.

TORONTO, SEPTEMBER, 1902.

No. 3.

Original Contributions.

OPERATIVE TREATMENT OF ASCITES DUE TO CIRRHOSIS OF LIVER, BY IMPLANTATION OF THE OMENTUM INTO THE ABDOMINAL WALL.*

BY GEORGE A. PETERS, M.B., F.R.C.S.(ENG.).

Associate Professor of Surgery and Clinical Surgery, University of Toronto, Toronto.

THE treatment of ascites due to cirrhosis of the liver by surgical measures constitutes one of the most recent instances in which the surgeon seems to have invaded the domain of the physician. The operation as now performed is based upon observations which were made originally by Talma of Utrecht, and were subsequently acted upon first in Holland in 1889 by Van der Meule, by Schelkly in 1891, and by Lens in 1892. None of these cases, however, lent much encouragement to the idea, as they all died uncured of the ascites. In 1894 Drummond and Morison claim to have independently conceived of the same idea as that which was described by Talma, and operated upon two cases, in one of which a brilliant result was achieved. Since the publication of the paper by Drummond and Morison in the *British Medical Journal* of September 19th, 1896, numerous operators in Great Britain, on the Continent, in America, and in Canada, have practised the operation with widely varying results, but on the whole with such a degree of success as to encourage further efforts. In a very able and comprehensive paper published in the *American Journal of the Medical Sciences* for March, 1901, Packard and Le Conte have collected and collated twenty-two cases, and numerous cases are scattered throughout medical literature subsequent to that date.

* Read before the Ontario Medical Association, June, 1902.

After a full analysis of the results of all the operations, having regard to errors of diagnosis, imperfections of technique, avoidable disasters, and complications which occurred in various cases, these writers summarize their conclusions very succinctly in these words: "Contrasting the worst view with the very best possible construction we can place on this table, we have the operative mortality lying somewhere between 23 per cent. and 7 per cent.; and the recoveries between 41 per cent. and 64 per cent.

Having regard to the well-known hopelessness of the treatment of cirrhosis of the liver by medicinal means, and taking into view the observations of Hale White, that the average length of life in cases of ascites sufficiently marked to call for tapping is only 63 days, it is surely not too much to claim that these statistics afford ground for encouragement in the practice of this operation.

One may perhaps with advantage review very briefly the phenomena upon which the operation of establishing a communication between the veins of the portal circulation and those of the abdominal parietes is based. (Fig. 1.) It is very well known that not by any means all cases of cirrhosis are accompanied by ascites. Lange found among 56 cases of cirrhosis of the liver of varying degree, that ascites was present only in 34 per cent., and the explanation of its absence in the remaining 65 per cent. appears to be found in the fact that in these fortunate and favorable cases there occurs an adequate collateral circulation between the venules of the portal circulation and those of the abdominal parietes, thus affording by nature's own efforts such a relief to the blood pressure in the portal veins, that transudation in excess of what can be absorbed by the lymph channels of the peritoneum does not take place. This collateral circulation consists, in the majority of cases, not in a new development of vessels through the formation of adhesions, but in a dilatation and amplification of the normal communications which were described by Sappey as existing between the portal and systemic veins, namely, through the esophageal plexus, and round ligament of the liver, the hepatic ligaments, and the communications of the inferior mesenteric vein with the iliac veins. Talma has reported a case in which a vein in the round ligament connecting the left branch of the portal with the epigastrie in the abdominal wall, was as large as the finger, and in my second case I found two veins each as large as a lead pencil running towards the heart in the base of the suspensory ligament, thus pointing to nature's attempts to relieve the portal circulation by opening sluices in this situation.

The initiation of nature's method of preventing the occurrence of ascites by the creation of an efficient collateral circulation through these channels is of course not within the compass of the surgeon. But Talma, and later, Drummond, observed in the study of a series of cases of hepatic cirrhosis *without ascites*, that there

were numerous vascular adhesions between the parietes of the abdomen and the viscera—notably the liver, spleen, and more especially the omentum. To the communication between the portal and systemic circulations thus established it seemed fair to ascribe the absence of ascites, and it is the *imitation* of this condition that the surgeon attempts by the operative procedures which

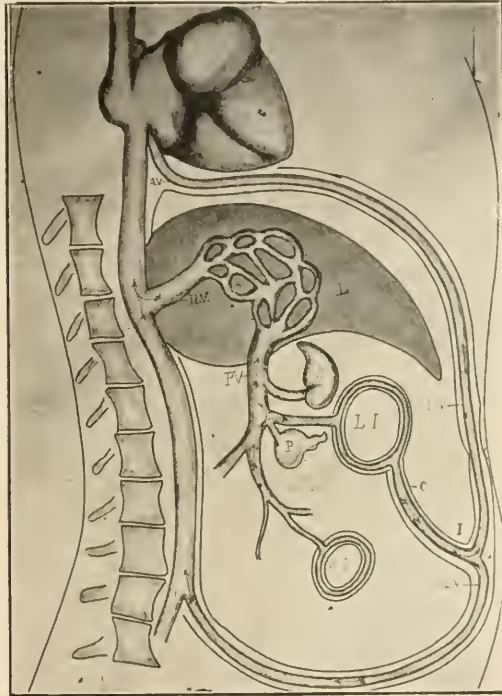


FIG. 1.

Diagrammatic scheme to show the collateral circulation the operation seeks to establish. The arrows show the direction of the current. The viscera drained by the portal vein are sufficiently indicated by the letters on the diagram. *I*, the point of implantation of the omentum into the abdominal wall. (This should have been shown above the umbilicus.) The veins from the omentum (*O.*) empty (1) into the intercostal veins (*I.C.V.*), which reach the superior vena cava through the azygos veins (*A.V.*), and (2) into the deep epigastric and lumbar veins (*D.E.V.*), which empty into the inferior vena cava through the lumbar, ilio-lumbar, and common iliac veins, thus avoiding the obstructed passage through the liver.

have been practised. It will of course be observed that such operations are based solely upon the theory that the occurrence of ascites in cirrhosis is due to a purely mechanical cause, viz., the obstruction offered by the diseased liver to the flow through the portal vein. This theory appears to be extremely well founded, and is, I believe, universally accepted to the pointed exclusion

of the toxic theory, which has in the past been greatly favored by some authorities.

CASE 1.—The patient, Mr. J. McG., a man aged 46 years, who furnishes the subject for this paper, was referred to me by Dr. Bowles, of Woodhill, in early part of July, 1901. At time of his admission to General Hospital the following history was obtained. He was a carpenter by trade in the early years of his life, but during the last five years he has been a hotelkeeper. There is some tuberculosis in the family history, but the patient himself has never suffered any severe illness until the present attack came on, and is certainly free at present from tuberculosis in the peritoneum as well as elsewhere. He is a man of splendid physique, about six feet in height and weighing, in health, about 190 pounds. He has always been a moderate drinker principally of malt liquors, but otherwise his habits and manner of life are good. There is no history of syphilis. The ascites first began to be apparent in February, 1901, after a mild attack of la grippe. The fluid in the abdomen increased with great rapidity, and the increase was accompanied by distressing symptoms of shortness of breath, palpitation, and a great sense of weight and fulness in abdomen. The girth of abdomen on June 6th, 1901, was 64 inches (Fig. 2), and on that date Dr. Bowles removed by tapping three patent pails full (estimated at 1,100 ounces). This was followed by great temporary relief, but the fluid reaccumulated so rapidly that on June 24th (18 days later) Dr. Bowles repeated the tapping, removing on that occasion 50 pints (1,000 oz.). He was admitted to the General Hospital under my care on July 16th, 1901, with such marked distention that 35 pints (700 oz.) were withdrawn at once. The withdrawal of this amount gave relief, but did not nearly empty the abdomen. The legs were markedly edematous, and pitted deeply on pressure. There was no albumen in the urine. The venules of the conjunctivæ, face, and trunk were deeply congested and blue, giving the man the dusky, mottled appearance of one in the deep stage of ether anesthesia. The pulse was very weak, and the heart's action greatly labored. There was marked shortness of breath, but no edema of the lungs. The abdomen presented a full, tense, rounded appearance, covered with stretched, shiny skin, and appeared to be on the point of bursting. The umbilicus protruded more than an inch, and was so thin that one could readily detect the translucency of the fluid within it. On percussion it was found that the liver was larger than normal, a condition which was verified at the time of operation. As free purgation and the exhibition of diuretics seemed to have no effect whatever upon the reaccumulation of fluid, the operation about to be described was advised, though the prognosis given to the patient was extremely guarded, both as to immediate and ultimate results.

The Operation.—An incision four or five inches long

(Fig. 3, A) is made in the median line above the umbilicus, care being taken to keep a trifle to the left, so as not to injure any of the vessels in the base of the suspensory ligament of the liver (Fig. 3, S. Lig.). This incision permits of a thorough exploration of the surfaces of the liver, spleen and other viscera, and also renders it certain that the omentum will be easily within reach, even though it should prove to be matted together and rolled up, as sometimes occurs, particularly if chronic peritonitis is present. Although most operators advocate local anesthesia, in my opinion the operation should be done under general narcosis, chloroform being used by preference. After the skin incision is made, the anesthetic need not be pushed to the full surgical extent. The operative incision, in my experience, amply serves to empty the fluid from the abdominal cavity, for which purpose the patient may be rolled to the side, if found desirable. This obviates the necessity for an additional incision above the pubes for drainage purposes, as is advocated by some writers, and lessens the danger of sepsis and of subsequent ventral hernia. It does not seem to me that it is necessary, or even advisable, to completely evacuate the fluid from the cavity at the time of operation. When one remembers the enormous amount of fluid which may be present, as in the case reported, one must recognize that its total removal must at the same time remove a very potent extra-vascular support to the thin-walled abdominal veins, and thus there might occur sub-peritoneal hemorrhages, or perhaps syncope, from accumulation of the blood in these vessels, since the abdominal walls from prolonged and excessive distention have largely lost their resiliency. In the case now reported, and in the majority of recorded cases, aspiration had to be practised repeatedly after operation before the newly-formed vessels offered any appreciable relief to the obstructed portal circulation, and I consider this method of getting rid of the fluid distinctly better and safer than continuous drainage.

After evacuation of the fluid through the wound, it will be found that the abdominal walls are so lax, that by everting the edge of the wound, and at the same time making pressure upon the lateral portion of the epigastric region, the parietal layer of peritoneum is made easily accessible for a considerable distance around the abdominal incision. The operation of engrafting the omentum into the anterior abdominal wall (*epiploexy*) was in this case then carried out as follows. (Tahna made a pocket in the abdominal wall for the lower end of the spleen in one case, and other operators have stitched the omentum between the detached peritoneum and the remainder of the abdominal parietes, but I have not been able to find their exact methods. At all events, I submit the method below described as an easy and efficient one.)

Avoiding the suspensory ligament of the liver, a longitudinal

incision about 1 1-2 inches in length is made through the parietal peritoneum and sub-peritoneal tissue as far laterally as can conveniently be reached. With the handle of the scalpel, or a pair of blunt-pointed scissors, a flap consisting of peritoneum and sub-peritoneal areolar tissue, is raised, and the peritoneum again cut through in a longitudinal direction at a point about 1 1-2 inches from the first incision. Thus is raised a flap or strap of peritoneum attached at both ends (Fig. 3, B1, B2). A pair of long-handled forceps is made to pass under this strap and seize a portion of the omentum, taking care to select a part in which there are veins of considerable size. This is now gently drawn through under the strap and held in position by a single catgut suture (Fig. 3, B1, B2). This process is again repeated at a point somewhat nearer the margin of the wound on the right side, and again in two or



FIG. 2.

Showing great distention of abdomen before operation. Girth, 64 inches. Note also the edema of the feet and legs.

three places on the left side. Thus the omentum may be easily and rapidly implanted into the abdominal parietes in four or five places. In addition to these grafts, however, another very large graft should be made into the suspensory ligament of the liver (Fig. 3, D). This may be very easily done by incising the ligament in a longitudinal direction, and drawing a large portion of the flocculent omentum—not necessarily its terminal portion—through this slit, and stitching it in place by one or two catgut sutures. In view of the fact that Talma found a vein as large as the finger in the free border of this ligament, and from my own experience, in my second case cited, I regard this as a very likely route for relieving the portal circulation.

The abdominal wound is then closed without drainage.

Post-Operative History.—The patient stood the operation wonderfully well, and recovered from its immediate effects very

promptly. In fact, the complete evacuation of the fluid relieved his circulation so completely that the benefit seemed to far outweigh the shock of the operation. The wound healed perfectly by first intention, and the patient was permitted to sit up in the third week. The fluid, however, rapidly re-accumulated, and tapping was required again before the patient left the hospital on the 26th day after operation. On his return home Dr. Bowles found it necessary to repeat the tapping at intervals, and the skin at the umbilicus gave way, so that constant leakage occurred from that point for about two weeks, but the sinus ultimately healed soundly. The actual dates of tapping after operation are August 27th, 32 pints; Sept. 10th, 24 pints; Sept. 29th, 20 pints. In October the patient began to improve, but fluid, in progressively decreasing quantities, was withdrawn on October 8th and 22nd, Nov. 2nd and 13th. Since the latter date the fluid has ceased to accumulate. At present (eleven months after operation) there is a small amount of fluid in the peritoneal cavity, but there is no edema of the legs, no shortness of breath, but little obstruction to the heart's circulation, and the patient enjoys a good measure of health, and is able to pursue his occupation with comfort. He is still a corpulent man, the circumference of the abdomen at present being 43 inches. The flesh is firm and free from edema, and altogether he presents the appearance of a man in fair health. The liver still maintains its condition of hypertrophic cirrhosis.

(Because it has a bearing in certain important points upon the subject under discussion, I wish to interpolate here a brief preliminary note of a second case upon which I have operated since reading the above paper before the Ontario Medical Association. This case was referred to me by Dr. H. H. Moorehouse, who assisted at the operation.)

CASE 2.—The patient, Mr. Q., is a man of good physique, aged fifty-four. He has always been a moderate drinker of malt and ardent spirits, but enjoyed good health until about June, 1901, when he began to complain of aching pains in the back. No ascites, however, was observed until October, 1901. At that time he noticed that the fluid increased rapidly in quantity, and the abdomen became greatly distended. On June 17th, 1902, Dr. Moorehouse removed by tapping 1040 ounces of fluid; and on July 7th, two days before the operation, we repeated the tapping, removing 960 ounces. On July 9th, 1902, we operated on this patient precisely as described above in Case 1. On making the incision in the middle line above the umbilicus, two veins, each as large as a lead-pencil, were found to lie in the base of the suspensory ligament, slightly to the right of the linea alba. These we carefully protected from injury by causing the line of incision to deviate slightly to the left. The round ligament itself, in the free border of the suspensory ligament, was very greatly enlarged,

being as thick as one's thumb. It appeared from palpation to be full of veins, as it could be readily compressed; but the peritoneum over it was so thickened, that the size of its contained vessels could not be estimated. I have no doubt that these were the veins described by Talma as communicating with the left portal vein before its entrance into the liver; and I have no doubt also that the blood from these veins poured into those I have already described

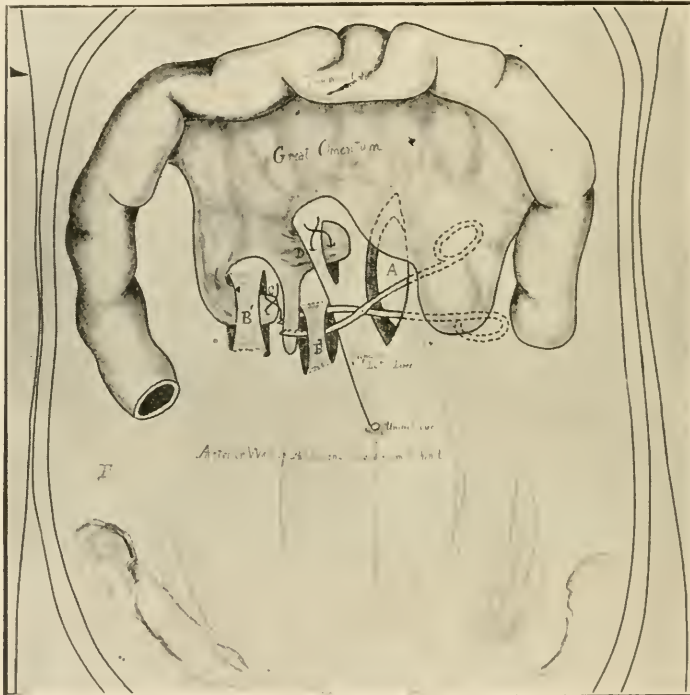


FIG. 3.

Diagram to indicate the method of implanting the omentum. The diagram represents the anterior wall of the abdomen, the transverse colon, suspensory ligament of the liver, and the omentum as seen from behind or within the abdomen. *A*, the incision in the anterior wall of the abdomen above the umbilicus. *A*, the straps of peritoneum raised to allow of portions of the omentum being drawn through. *C*, the implanted omentum stitched into position by a catgut suture. *D*, large graft into the suspensory ligament of the liver.

as running just under the linea alba, as the direction of the current in these latter veins was clearly upwards from the umbilicus towards the heart. In this case, also, I found the whole of the parietal peritoneum in a state of chronic inflammation. It presented a purplish congested color, and was very considerably thickened. A few flakes of lymph also were found upon its surface, but there was no indication whatever of tubercular disease. The

liver was somewhat enlarged, with rounded borders and slightly roughened surfaces, presenting, in fact, the appearance found in hypertrophic cirrhosis. The spleen also was very considerably enlarged, so much so, in fact, that after the second tapping, in which 960 ounces were removed, the notched shape of its anterior border could be seen plainly through the thin abdominal wall. The patient stood the operation very well indeed, and exhibited scarcely any signs of depression or shock. He has, moreover, no symptoms of the auto-intoxication leading to nervousness, delirium, etc., which have been described in other cases. It is now 21 days since the operation. The wound has healed throughout by first intention, but it is clear that ascitic fluid is again gradually accumulating, and doubtless he will require to be tapped repeatedly as in my first case before the benefits of the operation become established. I hope to make a further report on this case, as to the ultimate result obtained.

Remarks.—It will be observed that in my operations I did not irritate or scrub the surfaces of the liver or spleen, or the parietal peritoneum, to any extent whatever. I am aware that this is distinctly in want of conformity to the procedure originally advocated by Talma, and afterwards practised by Morison and almost all subsequent operators, and therefore the departure seems to demand reasons for its justification.

That the operation as described is efficient and adequate, is attested by the satisfactory condition of the patient (Case 1), whom I now present to the Association eleven months after the operation was performed. I may state that when I began the operation I had no definite plan differing from the methods advocated by the originators of the operation, but on opening the abdomen the liver presented itself as a very large organ with thick, rounded borders, and showed a degree of turgidity and congestion which led me to fear that even a slight irritation of its surfaces might lead to very extensive, if not dangerous, venous oozing. It seems to me also that an extensive scrubbing of this and adjacent surfaces in the sensitive and irritable splanchnic region must be productive of a very considerable degree of shock; and I felt that my patient's condition would not support such an assault. In fact, I submit that a moment's thought will substantiate the view that in the method of treatment above described there is really less traumatism inflicted, and consequently less shock produced, than in the scrubbing method, in which I consider that the shock is very much greater than would appear on a superficial view of the subject. Moreover, the large size of the veins in the omentum seemed to invite one's attention, and almost to suggest that if these were pocketed into the abdominal wall, communication with the systemic veins would speedily become established. Again, I would point out that the blood which first passes through the collateral circula-

tion thus established is that derived from the large intestine, which I surmise is much less charged with toxic substances than that which would be diverted from the venules on the surface of the congested liver. That this is not of trivial importance has been abundantly shown by the experiments of Hahn, Tilmann, Eck, and others. These authors have demonstrated that certain nervous phenomena, such as delirium and excitement, resulting apparently from a species of auto-intoxication, occur when the blood from the mesenteric areas, unmodified by being filtered through the liver, is suddenly allowed to enter the systemic circulation. These observations are further fortified by the clinical symptoms observed in Morison's third case, in Narath's case, in Le Conte's first case, and in several other reported cases. In my two cases, although both subjects were to some extent alcoholic, no such symptoms whatever were observed, and though this may be looked upon as a *post hoc* argument, the fact is stated for what it is worth. As to the outlook for this operation, one cannot but be encouraged by the results which have followed in many of the published cases. In the first case just narrated, also, the patient was certainly rapidly approaching a fatal issue. One might say that at the time of operation his span of life could be measured by weeks. He has now survived eleven months, and is in a very fair state of health. How long he may live is, of course, a problem, but his condition at present is one of progressive improvement. I am disposed to think that the cases in which the cirrhosis is of the hypertrophic type are the most favorable for operation, because in them the amount of liver tissue available for carrying on the hepatic functions is sufficient for the purposes of a healthy life when relieved from the embarrassment of circulation by the establishment of collateral venous channels.

102 College Street, Toronto.

CEREBRO-SPINAL MENINGITIS.

BY ALEXANDER MCPHEDRAN, M.B.,

Professor of Medicine, etc., University of Toronto.

DURING the past year cases of cerebro-spinal meningitis have been met with from time to time in Toronto. In February there was, what may be termed, a slight epidemic, there being seven cases in the Hospital for Sick Children at one time. Probably the first cases were two children, brother and sister, whom I had the opportunity of seeing with Dr. C. M. Foster, in April, 1901. They had just arrived from Winnipeg. They were very severe cases; the boy died in a few days and the nature of the disease was demonstrated by autopsy. The sister was sent to the Hospital for Sick Children. She was very ill for three weeks, the typical symptoms, as herpes, which was very extensive, retraction of the head, hyperæsthesia, emaciation, delirium, etc., being unusually marked. Although desperately ill she made a complete recovery and was discharged in June.

An occasional case was admitted during the summer and autumn. Late in the winter it assumed an epidemic character. I have notes of twelve cases, of whom six died and six recovered. Of the latter one boy was discharged apparently well, but a month afterwards became suddenly ill with pain in the head, and died two days later, no doubt due to a recurrence of the disease. The recoveries were all complete, none of them suffering from such permanent injuries as loss of hearing or sight, so often resulting from this disease.

The symptoms were characteristic in eleven of the cases; one was comatose when first seen and died in a few hours.

The *onset* of the disease was sudden in nine; doubtful in two; and in one a history could not be obtained.

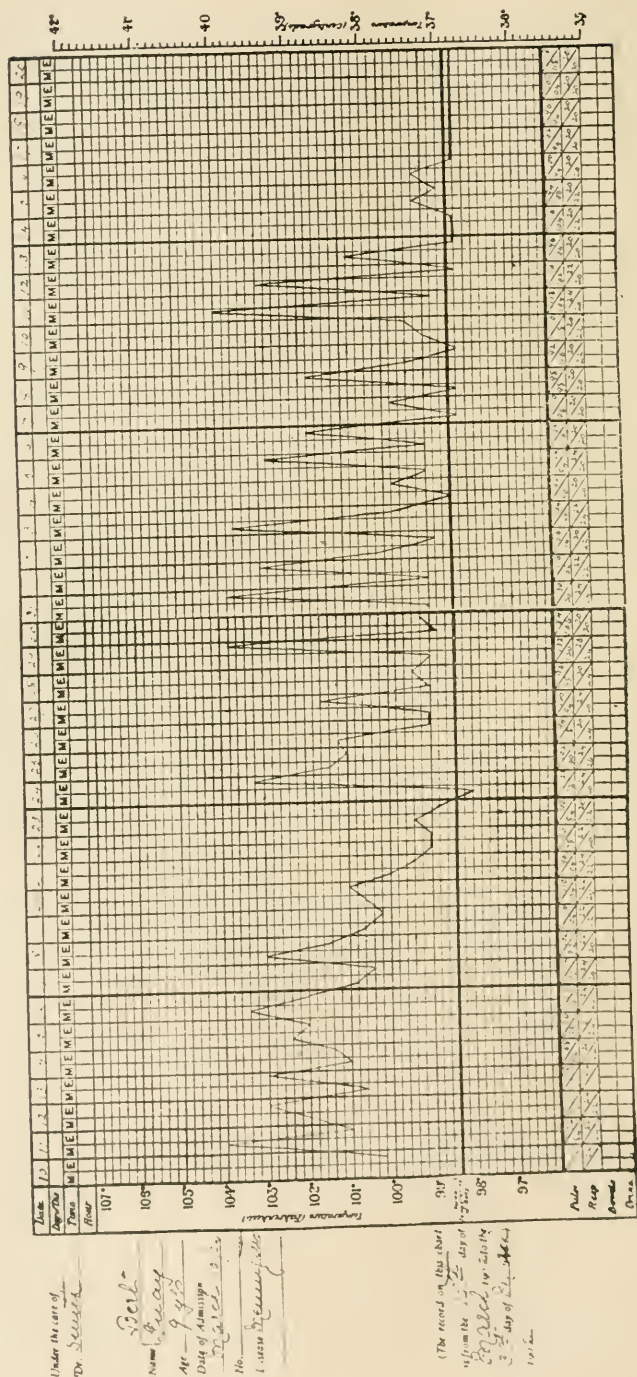
Headache was an early and severe symptom in all the cases.

Spasms of the muscles of the neck and back occurred in all, causing retraction of the head in seven, in three of which it was very marked.

General hyperæsthesia was marked in ten, affecting both skin and muscles. It was most easily demonstrated in the thigh, probably because the femur forms a good basis against which pressure can be easily made.

Rash was present in five cases. It was *petechial*, but small and scanty, and disappeared early.

Herpes facialis occurred in six, but was marked in three only. When present it is almost sufficient of itself to exclude tuberculous meningitis.



The *temperature* was very variable in all the cases, reaching 104 degs. F. in most of them. It was markedly remittent in some, as shown in the charts here presented.

Kernig's Sign was marked in nine cases; slightly developed in two; and in one it was not noted, as the child was comatose when first seen, and died shortly after, but it was doubtless present, as there was general tremor—an almost constant sign in bad cases.

Lumbar puncture was done in four cases. In three clear sterile fluid was obtained, but none in the fourth. In one of these three cases autopsy demonstrated the existence of cerebro-spinal meningitis.

Leucocytosis was present in two cases, there being over 20,000 leucocytes per c.mm. Unfortunately a blood examination was not made in the other cases.

Vomiting was not common, occurring in five cases, and troublesome in two only. In one it was very hysterical in character.

The *bowels* were usually constipated. The stools were very offensive in four cases, but diarrhea occurred in none.

The *spleen* was palpable in three cases; could not be felt in two; its condition was not noted in the others.

Convulsions occurred in none, but there were marked general tremors in three of the cases.

Photophobia was observed in all but the child that was comatose when first seen. The pupils were inactive in eight cases.

Active delirium occurred in one only; in eight stupor was marked.

Otitis Media occurred in one case. Streptococci were obtained from the discharge so that the case may have been one of septic meningitis, yet the course was too protracted for that disease.

A few of these cases merit more special notice. The following case, seen with Dr. Harley Smith, to whom I am indebted for the history, is very interesting, in view of the markedly remittent temperature.

CASE 1.—B.G., boy, aged 8; family history good; previous history normal; had scarlet fever two or three years ago; in excellent health up to Sunday, March 9th, 1902. After coming from church in morning complained of headache. Vomiting and delirium set in within a few hours. He was seen first on the afternoon of May 10th, when he was delirious. T. 100, P. 104, R. 24. There was present universal hyperæsthesia—no convulsions, no opisthotonos. There was muscular spasm in upper and lower extremities. There were also present about a dozen purpuric spots on the chest and abdomen, which disappeared in the course of ten days. The most troublesome symptoms during the first week were the vomiting, insomnia and pains in the head and

back of the neck. The pulse at first 104, became 72 on the second day and remained slow for three or four days, then became more frequent and remained so until convalescence. Morphia hypodermically gave him relief on the third day and again on the sixth day. A third hypodermic on the eighth day was ineffectual. After consultation with Dr. McPhedran, hot baths (T. 100, lasting ten minutes) took the place of the morphia and produced excellent results both in relief of pain and in procuring sleep.

During the third week the paroxysms of pain, accompanied by fever, vomiting and mild delirium, assumed an intermittent character, coming on every other day with more or less regularity. This peculiarity continued till convalescence. During the sixth week he became entirely free of paroxysms.



SHOWING KERNIG'S SIGN.

There have been no sequelæ. Intellect, vision and hearing are quite normal. Rapid action of the heart continued for two or three weeks, but gradually disappeared.

The notes of the two following cases are kindly furnished by Dr. J. W. Rowan, with whom I saw the second one.

CASE 2.—Mabel J., aged 3 1-2 years, had mild attack of mumps in latter part of February. She was well after with the exception of fairly severe conjunctivitis in the right eye. On the evening of March 10th she had pain in the head and complained of being chilly. Next morning she was seen by her mother at 4 o'clock, and again at 7 o'clock; she was then sleeping quietly. At 8.30 a.m. her elder sister, who slept with her, called her mother, who found her (Mabel) unconscious. On picking her up she noticed that her whole body was in a state of general tremor. There were no

convulsions, but the coma continued until her death at 2 o'clock the same day.

CASE 3.—Tommy I., aged 5, became sick on March 11th, the day of his sister's death. He complained of headache. He would put his hand to his head, saying, "Oh ! my head." Nose bled freely at night and he was delirious. There was nausea and some vomiting. Temperature 102 degs. F. The headache gradually lessened, temperature became lower, and in a week he was apparently well, though the temperature was slightly elevated. On March 21st and 22nd he was out playing all day and ate heartily. Early on morning of Sunday, March 23rd, commenced to cry, complaining of headache and nausea. When seen a little later by Dr. Rowan his temperature was 102.5 degs. F. He was very restless; muscular tremors were marked. On Monday, 24th, he lay with his eyes closed and head turned from the light. Though apparently in stupor he could be roused. There was spasm of the muscles of the neck and back, but no retraction; any movement caused much pain. The pupils were moderate in size and quite inactive. There was decided hyperæsthesia of the body generally. Kernig's sign was easily demonstrated as it was very marked.

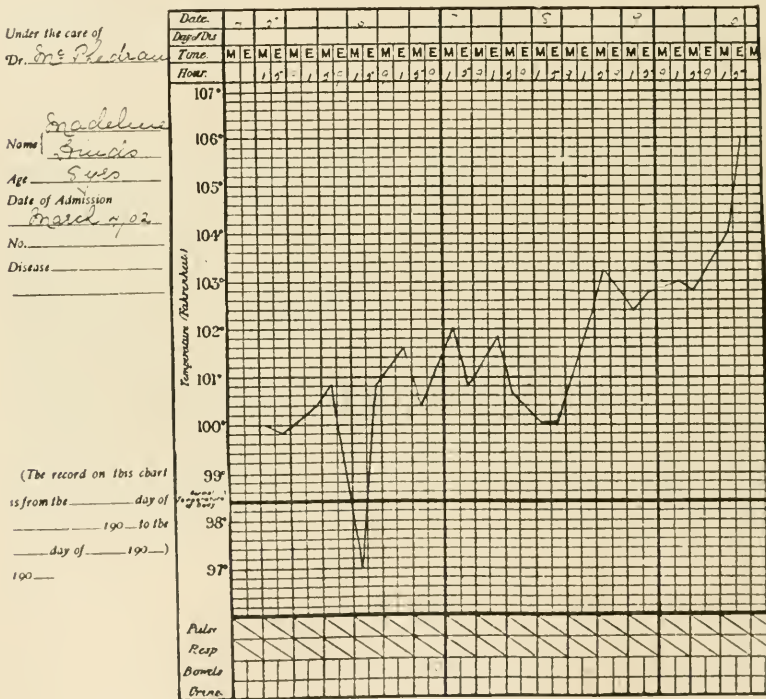
The temperature, which varied from 98 to 104 degs. F., became normal a week later. The pulse was generally about 100, but was irregular and had been up to 160 per minute. He improved rapidly and made a complete recovery.

In this case the symptoms were typical, and there is no doubt as to the diagnosis of cerebro-spinal meningitis. This confirms the diagnosis in the little sister's case. In her the muscular spasm and coma indicated disease of both brain and cord, and there can be no reasonable doubt as to the nature of the infection. It is the most rapidly fatal case that I have met with.

CASE 4.—The following case, an Italian boy, aged 4 1-2 years, had otitis media a year previously. The condition in the interval is uncertain. He became suddenly ill on March 15th, 1902, with severe headache and vomiting. He was admitted to the Hospital for Sick Children on March 18th. There was a good deal of stupor, much headache, general hyperæsthesia, much restlessness, marked rigidity of the muscles, especially of the neck and back, and Kernig's sign and great retraction, as shown in the accompanying photograph. The bowels were constipated, and when acted on the discharge was extremely offensive. On the 20th, two days after admission, the right ear discharged offensive pus, due to streptococcic infection. Lumbar puncture was done in the 3rd and in the 5th lumbar interspaces, but no fluid was obtained. The temperature was irregular, reaching 105.4 degs. F. two hours before death. There was considerable delirium but no convulsions. Warm baths (100 degs. F.) for ten minutes were always followed by an hour's relief and usually by sleep. Large doses of morphine subcutaneously did not affect

the pain. He died on the 23rd, the ninth day of his illness. The occurrence of this case when there were so many others, and the early incidence of the spinal symptoms indicate that it was one of cerebro-spinal fever, notwithstanding that there was a streptococic discharge from the ear.

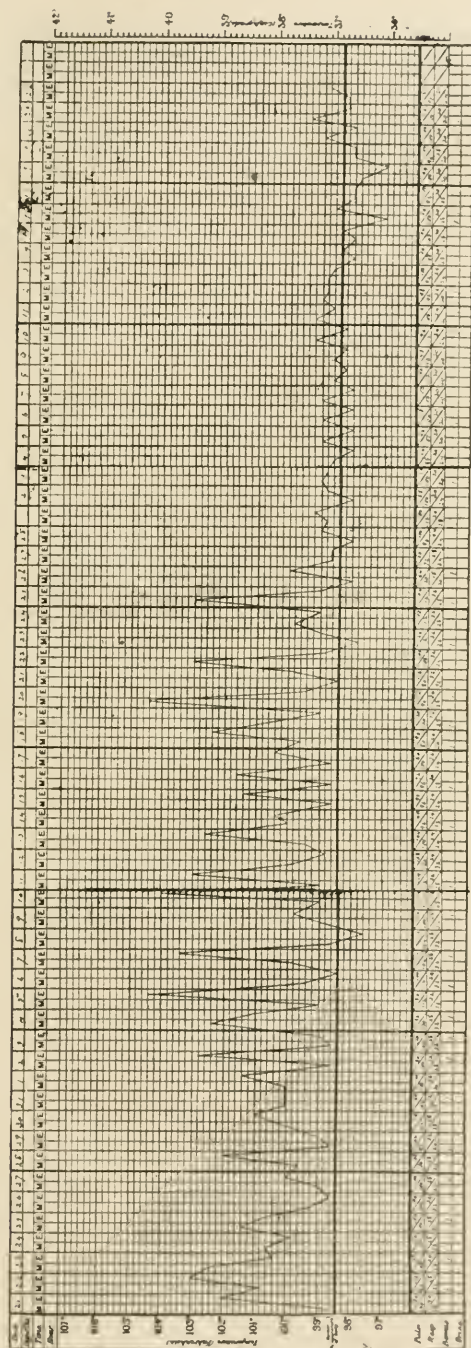
CASE 5.—M. H., aged 8, entered the Hospital for Sick Children on March 4th, with a history of illness for four weeks supposed to be bronchitis and typhoid fever. She was emaciated and showed marked stupor, but could be roused. She had a large foul ulcer on the inner surface of the lower lip. The spleen could not be



felt, and the blood did not give the Widal reaction for typhoid fever. She complained from time to time of severe headache and showed delirium when roused. The temperature was moderately elevated and irregular; the pulse was feeble, rapid and irregular.

The head was slightly retracted, the muscles of the neck and back rigid, and any movement gave her pain. Kernig's sign was fairly well marked.

Lumbar puncture was done and one and one-half ounces of clear, pale fluid obtained, which was sterile. She died on March



Charles H. ...
M. ...

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Date of Admission,

Jan 41/92
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On July 10, 1994

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10th, six days after admission, temperature having risen to 106 degs. F. and pulse to over 160 per minute before death.

On *post-mortem* examination there was found meningitis, chiefly of the base of the brain and of the spinal cord, and the infecting organism was the diplococcus intercellularis of Weichselbaum. There was also found a small tuberculous nodule in the right lung, and some of the bronchial glands were caseous.

CASE 6.—The following case is interesting chiefly on account of the protracted course, the apparent convalescence and the relapse with the marked neurotic symptoms that occurred.

Olive T., aged 12, admitted to the Hospital for Sick Children January 17th, 1902, with the typical symptoms of cerebrospinal meningitis. There was pain in the head and back; irregular fever; slight petechial rash, which faded in three or four days; general hyperæsthesia; herpes on lips and cheeks; Kernig's sign; retraction of the head; sluggish bowels, with very offensive evacuation, etc. On February 18th she became very hysterical and tried to vomit whatever she did not wish to take. She lost flesh and strength rapidly and on the 28th the pulse became very irregular, falling as low as 50 per minute. She appeared comatose, but could be roused.

Improvement then set in, and by March 8th she sat up in bed. She improved uninterruptedly until March 20th, when vomiting and headache recurred. The headache became severe, and the pulse slow and feeble. On the 23rd March she sat up in bed, became suddenly cyanosed and died in a few minutes. No *post-mortem* examination was permitted.

This short series of cases calls for little by way of further comment. They are all fairly typical cases of the disease.

The only treatment found of use was the hot bath. It quieted the extreme restlessness, eased the headache, and caused sleep, lasting for an hour or more. Several fell asleep in the bath. Even large doses of morphine hypodermically had little effect on either pain or restlessness.

I am indebted to the kindness of Dr. A. Rutherford, House-Physician, for the histories of the hospital cases.

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TREATMENT OF PAINFUL GROWTHS, MALIGNANT AND NON-MALIGNANT, BY THE HYPODERMIC USE OF THIOSINAMIN.

BY J. F. MACDONALD, M.D., HOPEWELL, N.S.

THE remedies proposed, used, and experimented with for the cure of cancer are many; in some cases results are encouraging. From clinical study and research now in progress the outlook brightens, and in the near future it is hoped that this disease that has so far baffled the skill and resources of our profession will be amenable to treatment. Is it contagious? is a question yet to be settled.

Among the remedies used, one of which little has been heard is thiosinamin. Its medicinal use was first reported about ten years ago by Hebra. It has been used in glandular enlargement, for absorption of cicatricial tissues, in skin diseases, in adenoid growths, malignant and non-malignant, with varying results. For the absorption of adventitious tissues, cicatricial tissues and neoplasms its use has given good results.

The best results are gotten from it when used hypodermically. Given by this method its absorption is rapid. Patients often find a garlicky taste in from two to five minutes after administration. Elimination is not so rapid. When given by the mouth very little benefit seems to be gotten from it, and much larger doses are needed.

I have used it since 1896, and have never found ill effects from its use when not pushed too far by large or too frequent doses. In painful growths, even where it does not cure, pain is readily relieved. In painful diseases of the alimentary canal, including nose and throat, its use is remarkably beneficial. In external growths I have not found its use satisfactory.

I submit a few cases which may be interesting :

CASE 1.—Mrs. M., aged 62, married, never had children. Was a strong, healthy woman until about ten years ago, when she began to have dyspeptic attacks; five years ago had a severe attack, with pain and persistent vomiting, from which she recovered; has never been so well since; has been subject to attacks of pain and vomiting. Family history not good; two brothers and one sister died from cancer of stomach. The pain in her stomach gradually became more frequent. A year before beginning treatment by thiosinamin the pain was so severe that morphine had to be taken daily and in increasing quantities. Vomiting was so frequent that little or no food was retained. She

became emaciated, anemic and cachectic. On palpation of stomach, found a hard, painful tumor about the size of the closed hand in the median line, which could be plainly seen on inspection. Diagnosis, cancer of stomach.

Treatment.—September 18th, 1896, began treatment by hypodermic injections of thiosinamin, gr. 1-3; about two minutes after, while arranging my syringe, she said she had “a queer taste in her stomach,” the garlicky taste often experienced after taking a dose of the drug. On the 22nd the pain had been less since first injection; gave second dose, gr. 2-3. On the 26th vomiting had ceased; no pain, and can take a little liquid food. Tenderness on pressure unchanged; said she felt much better and able to sit up; gave third dose, gr. 2-3. October 1st, called at my office on her way home from church and received fourth dose, gr. 2-3. Said she felt well and took food freely without giving pain. No vomiting. From this date the dose was increased to gr. 1 1-4, and was given very irregularly until January 16th, 1897, four months from beginning treatment. The tumor has decreased in size—almost disappeared; there is neither pain nor vomiting and she has gained in weight and strength. Considers herself well and discontinued treatment. June 30th, 1898, she called at my office, reporting herself as well. The tumor has disappeared entirely. Five and a half years have passed and there is no return of disease. She is well.

CASE 2.—Female, aged 50, married; has had eight children. Family history good, except that one brother and one sister died of tuberculosis.

October 26th, 1896, is suffering from pain in the stomach and vomiting; anemia and cachexia marked. Has had frequent attacks of pain in her stomach and vomiting for the last year, dyspepsia attacks extending further back; has lost flesh rapidly lately. Pain is now almost constant, severe, “cutting and darting,” vomiting frequent, so that very little nourishment is taken or retained. No blood vomited. On palpation, found tender, uneven induration near and to left of pylorus. These symptoms strongly suggest a suspicion of malignant disease. Gave gr. i. thiosinamin hypodermically. October 31st, no improvement; gave second dose; experienced no effects in any way from the drug. November 4th, found her a little better, pains not so severe; gave third dose. November 7th, gave fourth dose. She is much improved, pain almost gone, no vomiting; takes a little food with but little inconvenience, is out of bed and feels comfortable. The treatment was continued, giving gr. iss. to gr. ii. twice a week. November 30th, much improved; tenderness on pressure much less. Twenty-three injections were given extending over a period of four months, at the end of which time she was apparently well and has had no return of disease to this date.

CASE 3.—Male, aged 45. Clinical history much like the preceding, but of longer duration and apparently severe. Palpation of stomach reveals a hard, flat, nodulated tumor at and to left of pylorus, which is very tender to touch; he is anemic and greatly emaciated. Diagnosis, probably malignant disease of stomach. The treatment was the same as the preceding cases, extending over a period of three months, taking twenty-two doses, at the end of which time he appeared well, and has remained so to this date.

CASE 4.—Male, aged 64. One sister died of cancer of uterus. He has been a chronic dyspeptic for twenty years. May 11th, 1898—For six months pain in the stomach has been constant and increasing in severity, vomiting every day. For four weeks previous to my seeing him the pain had been very severe and vomiting frequent. Says he vomits everything he swallows; vomiting occurs ten or fifteen minutes after ingesta; no blood vomited. On examining the stomach found tenderness on pressure, especially near the pylorus, where there was a hard, rough enlargement. He was greatly emaciated, cachexia very pronounced. Diagnosis, stenosis of pylorus, caused by malignant disease.

Treatment.—Gave thiosinamin, gr. iss. every third day. The pain and vomiting relieved after the third dose. He received ten doses of gr. iss.; the pain and vomiting ceased and he was able to take food; gained in flesh and strength and was able to attend to business. The enlargement at pylorus almost disappeared. He then refused to continue the treatment. After a year's immunity from suffering the disease gradually returned; he was treated by another physician, but died before the end of the second year from the time the thiosinamin was discontinued. Had he continued the treatment as I urged him to do his cure would probably have been as complete as the others.

In the four cases here briefly reported the most remarkable feature is the rapidity of relief from pain, no narcotic being given after the first injection of thiosinamin. The severity of the symptoms and clinical history leave little doubt as to their malignant character. Nos. 1, 2 and 3 at nearly the end of six years are well and are cured.

In a case of tumor of the pancreas of one year's growth—the pain and tenderness existed six months before the tumor was recognized—the relief was as prompt and results as satisfactory as in the other cases. Treatment was followed for three months, at the end of which time the tumor had disappeared, and with it the pain and soreness. In two cases of chronic disease of the throat of a year's standing there was pain, with tenderness on handling, and a little enlargement of glands; the results of the treatment by thiosinamin were satisfactory. No return of disease after four years.

In a case of cancer of the breast of about a year's standing,

I used the thiosinamin treatment, but after giving fourteen doses, there being no improvement except that the pain was not so severe, it was discontinued.

In treatment of skin diseases most favorable results have been obtained wherever I have used it. In treatment of enlarged prostate its use will be found most beneficial.

It is not claimed that malignant, internal growth may or can be cured by hypodermic use of thiosinamin. The number of cases are too few and my experience in the use of the drug too limited, although I have been studying its use and action for the past six years. Yet the cases here given, which I believe to have been malignant, with a few others treated, have been cured.

TECHNIQUE OF THE REMOVAL OF TUBERCULAR CERVICAL GLANDS.

BY L. W. COCKBURN, M.D., HAMILTON.

IN dealing with the subject of removing tubercular cervical glands, I wish to be understood to refer to the deep-set only. The removal of the superficial glands being comparatively easy, and lying within the "canons" of every-day surgery. I propose first to briefly outline the procedure experience has taught me to adopt in all these cases, and will then touch on a few points in the technique of the operation.

I make a straight incision, the whole length of the neck lying just posterior to the anterior edge of the sterno-mastoid. I pay no attention whatever to any structures lying between the skin and the muscle. The external jugular vein being clamped, cut and tied, and any nerves severed as they are met. The anterior edge of the sterno-mastoid is then defined from end to end of the incision, and the muscle "cleaned up" from the underlying parts, keeping close to it and using considerable traction. Towards the upper part of the incision this tension on the muscle causes the spiral accessory nerve to stand out plainly, and it is easily identified. I now clean the nerve, in order that being clearly seen it may not be injured in the subsequent manipulations. I now turn to the lower end of my incision and identify the internal jugular vein; having clearly made it out, the next step is to define the boundaries of the glandular mass by carefully peeling the surrounding parts off on all sides till the whole enlargement stands out plainly, though still, of course, adherent by its base. I now select the largest and best-defined gland and carefully incise its capsule, taking care not to enter the gland substance. The cut edges are clamped and very gently retracted, then with the point of a small sharp knife I sever the numerous trabeculae which dip into the substance of the gland from the capsule. I now, by means of a pair of mouse-toothed forceps, make gentle traction on the gland, and at the same time roll it over so as to bring fresh trabeculae into view. It is surprising how easily and quickly a large gland can be removed in this way. After all the glands have been so treated all that remains of the large glandular mass is a collapsed empty frame work of capsule vessels and thickened connective tissue. I now direct my assistant to compress the jugular at the root of the neck. This throws the vein and its tributaries into prominence, when the whole framework just mentioned can be easily and safely cut away with a pair of scissors curved on the flat.

I have more than once in this way cleaned away large masses of matted glands right up to the jugular foramen easily and quickly. Before closing the wound I go carefully over it, keeping the vein distended and pairing away any fragments that remain. The wound is then closed in the ordinary way without drainage.

Comments.—Any one who starts out to clean the triangles of the neck under the guidance of the descriptions in the text-books on surgery, will, if his experience tallies with my own, often find himself in a tight place. Most of the written descriptions of this procedure which I have read deal in vague generalities. No definite plan is advised, and the operator, especially if a beginner, after making his incision, which he usually does in the long axis of the swelling (a great mistake), finds himself groping over the wound area trying to find the easiest looking gland in the bunch for the purpose of removing it by that abominable procedure called "blunt dissection." He is further mystified by a multitude of fancy incisions—S-shaped, angular, curved, crossed, and crooked. In the *International Text-Book of Surgery*, Vol. II., page 124, Fig. 79, is shown three incisions for the removal of tubercular glands. Woe betide the unlucky neophyte who attempts to clean the triangles of the neck through such incisions! Yet this work is, I believe, looked on as one of the best, as it certainly is one of the most modern, of the standard works on surgery. Authorities talk glibly of dissecting up flaps of skin, subcutaneous tissue, platysma and fascia, as if the procedure were taking place on the neck of a cadaver in the dissecting room, instead of upon the neck of a living patient, with the parts matted, distorted, and oozing with blood. I must respectfully demur to all this and a great deal more. In my humble opinion, to talk of turning back flaps composed of certain definite structures is ridiculous. The parts are usually so matted that all such land-marks are obliterated. Again, the stock advice to keep close to the capsule of the gland sounds very soothing in print, to an inexperienced operator, but when face to face with his patient he will find it anything but soothing in practice. Even if he does succeed in digging out a gland, it will only be to reveal a dense matted adherent mass below and around. There are three points in the technique of the operation to which I wish especially to allude. Section of the sterno-mastoid, blunt dissection, and removal of parts of the internal jugular vein. First, with regard to division of the sterno-mastoid. I have seen it done. I have never done it. I never intend to do it. I believe it is unnecessary in any case, and should anything go wrong with the healing of the wound it may cause a serious deformity. With regard to blunt dissection, I most strongly deprecate its use. It appears to me thoroughly unsurgical and clumsy. To take a pair of blunt-pointed seissors, as I have seen advised, and proceed to enucleate deep cervical glands by alternately gouging and snip-

ping, keeping meanwhile traction on the growth, appears to me about as dangerous to the patient's neck as the proverbial bull would be to the china shop. As to the necessity for excising part of the jugular vein, which several good authorities advise, I believe it is never called for. If the suggestion I have made is followed, the vein is easily cleaned throughout its whole length. I have never removed part of the jugular vein, but I have seen it done, and as with section of the sterno-mastoid, I can emphatically say I will never do it. The deep veins are extremely fragile and easily torn. They will not stand anything like the hauling and pulling that the superficial veins will, and to strip up the internal jugular and tie it off as it enters the jugular foramen, in my opinion, exposes the patient to far more peril than ever his cervical glands could do. There is another grave objection to cutting the deep jugular vein. Tubercular glands are common, and may return on one side after having been removed on the other. Should the first operator be an enterprising man, and remove a piece of the jugular on one side, and the patient subsequently falls into the hands of another surgeon for the purpose of having the other side of the neck cleaned, and should the second operator also remove a piece of the internal jugular on his side, the result to the patient would be startling, to say the least of it.

I think the instructions frequently given to save this or that branch of the superficial cervical plexus is a mistake, so is the advice to try and save the external jugular vein. No harm comes from the division of these structures, and the operator has quite enough to think about without bothering his head over unimportant vessels and nerves. For all practical purposes, the only structures that need be thought about are the internal jugular vein and the spinal accessory nerve.

I quite expect what I have said will be subjected to a good deal of criticism. I shall be told that I am smearing a fresh wound with armies of tubercle bacilli from the infected glands by opening the capsules. I can only say I have done it repeatedly and seen no ill-effect follow, and furthermore, it must be borne in mind that all surgery is a choice of evils, and on this principle, speaking for myself, I would much prefer the risk of infection from a broken down gland than the risk of having my internal jugular tied off close to the foramen.

I am conscious of having dealt with this subject in a very imperfect way, but my experience has been small, smaller, I feel sure, than that of many of my hearers, and I shall await with interest expressions of opinion on the points I have raised which may fall from those present better qualified to speak than I am.

NOTES FROM THE OPERATING THEATRES OF LONDON.

BY F. WINNETT, M.R.C.S.(ENG.), TORONTO.

FOURTEEN years had passed since my student days in London, and I was prepared to see perfection in technique and radical changes in keeping with modern surgery, but in many instances it was disappointing to find work decidedly mediocre being done. While most of the hospitals have built operating rooms with due regard to asepsis, students have met with little consideration. They seldom accommodate more than twenty-five or fifty, usually standing; and of those not more than a dozen can see the operation.

Following are a few scattered notes of operations which are fairly representative:

1. Mr. Godlee, University College Hospital. Operation—nephrectomy. The previous day he operated for stone, but incision revealed sarcoma. The incision was enlarged and the twelfth rib removed. Double sets of ligatures were used for the pedicle, the second being tied after the kidney was removed. He spoke of once having had the ghastly experience of seeing the usual ligatures slip off the pedicle as soon as it was divided.

The cystoscope or X-rays had not been used, although the latter has revealed calculi weighing from 12 grs. up. No suspicions were likely entertained of the necessity to remove the kidney, or else permission to do so would have been obtained.

2. Appendicitis suspected. The patient was a middle-aged man. To clear up the diagnosis he made a median incision, and found a hard mass the size of a finger towards the right side. Judging it to be the appendix the wound was closed and the usual lateral incision made. Finding several lumps he suspected tubercle, took a particle for the microscope, and closed the wound. The specimen having been mounted pus was found, and his suspicions reverted to the appendix.

His first suspicions should have led him to make the exploratory incision over the appendix. Both incisions were exceedingly small, and the appendix was not seen, and possibly not felt. In fact, although quite close, I doubted if the thickened and adherent peritoneum was opened.

3. Nephrectomy—female; cyst of kidney; urine 30 oz. No bacillus tuberculosis nor pus. Was in doubt as to the cause, and spoke of the possibility of stricture of the ureter. Did not catheterize ureter, or prove the second kidney was healthy. On removal it proved to be tubercular.

4. Recurrent cancer of tongue. Some time previously he had removed half of the tongue. Tongue was loosened and drawn out,

the base compressed with curved forceps, and amputated. An attempt was made to catch the artery, and the compressing forceps was removed. The artery bled long and furiously before it was successfully tied.

Mr. Pearce Gould, Middlesex Hospital. Diagnosis—Cystic tumor of breast, with hematoma, in a woman aged 40. Incision revealed simple hematoma, with masses of fibrin. Mr. Gould said he was misled by its lobulated appearance and its attachment to the skin. The dressing consisted of a pad of double cyanide gauze, and over this, bichloride absorbent cotton. He said he was not aware Lister taught that these two salts formed a compound without antiseptic action.

Dr. Spencer, University College Hospital. Diagnosis—Carcinoma of uterus. Some time previously curettings were diagnosed as cancerous, but he still believed it to be innocent, and contented himself with curetting. As the disease returned he decided to remove the uterus. The vagina was very small, and the uterus quite immovable, yet the vaginal method was chosen.

The perineum was freely divided, and the thermocautery used in place of the knife. Antiseptics were used and rubber gloves worn, yet feces were allowed to constantly escape. The cervix and body were affected, and so soft that most of it came away in bits when drawn on by the forceps. Six pairs of forceps were left applied to the broad ligaments. It was a tedious and dirty operation. The early microscopic diagnosis should have been followed by removal, and few at home would for a moment consider the vaginal route at such an advanced stage, not to speak of the other contra-indications.

Mr. Butlin, St. Bart's Hospital. Excision of head of humerus for caries. Frequent attempts to pass curved needle around neck for chain saw, and also aneurismal needle failed. A straight saw was tried repeatedly, in combination with forceps, before it was successful.

2. Patient brought into theatre anesthetized was cyanosed, due to a tight bandage over the dressings about the neck. It was so tight that difficulty was experienced in cutting it.

Mr. Walsham, St. Bart's Hospital. Cancer of breast in a fleshy woman. The oval skin removed was four inches broad. Incisions went down to muscle, axillary vessels were cleaned with the knife, incision was carried up to clavicle, pectoralis major was divided, fascia from pectoralis was removed by itself. As skin would not cover wound it was freely loosened, an incision carried down from the inner extremity of oval, and the pectoralis major removed. Many silk-worm gut sutures were inserted and drawn with such force that several broke, and the skin was left blanched. Wound was reduced to two inches square. Time occupied, sixty-five minutes. The tension was excessive, and must assuredly have caused sloughing.

J. Hutchinson, jun., London Hospital. Patient, a woman, had a small tumor of the breast, which had been tapped. He

diagnosed it as adeno-cystoma, but operation revealed a condition resembling melanotic sarcoma or nevus.

Mr. Bland Sutton, Chelsea Hospital, had operated on this patient six months previously, and removed ovaries. Recovery uneventful. Diagnosis—Pain in one side. Cause not known.

At 3.28 began operation; 3.30, finger in peritoneal cavity; 3.35, finds abscess of stump. Although he believes the pus is sterile yet he drains. Operation completed at 3.45.

2. Hysterectomy. Diagnosis—Fibroid.

At 2.32 operation begun; 2.33, tumor size of fetal head exposed on abdomen; makes some remarks to visitors; 2.35, tumor and body removed, forceps left applied to arteries, uterine artery spurted; 2.40, peritoneum dissected back and cervix removed; 2.55, ligatures and sutures applied. Peritoneum, aponeurosis and skin sutured separately. Operation completed at 3.03; dressed at 3.05.

3. Hysterectomy.

At 3.13½ operation begun; 3.14½, uterus and tumor, size of large fist, exposed on abdominal wall; 3.15, catches right ovarian artery in forceps, and with knife divides it on uterine side. Right uterine follows. Makes transverse incision of peritoneum. Left side done, and cervix divided; 3.16, uterus removed; 3.35, ligatures and sutures applied. Operation completed at 3.45.

This method of compression, division, and then applying ligatures is in keeping with general surgery.

4. Extra-uterine pregnancy or tumor.

At 3.48 operation begun; 4.04, finds cyst of ovary and nevus of broad ligament; 4.24, tumor removed. Operation completed at 4.25.

For coolness and rapidity without hurry or excitement, Sutton cannot be equaled, and this is also the opinion of my friend, Dr. Wishart, of London, Ontario, who suggested keeping time.

INDICATIONS FOR, AND TECHNIQUE OF, OPERATION FOR NEPHROPTOSIS.*

BY AUGUSTIN H. GOELET, M.D., NEW YORK.

(Abstract.)

THE importance of nephroptosis as a factor in producing renal disease, and also disease of the female pelvic organs, was emphasized by the author, who thinks this is not generally appreciated, or the utility of nephropexy would be more universally recognized.

Nephropexy may be regarded as a fad of the surgeon by those who have not investigated the subject carefully, but he thought the surgeon the better judge of the necessity for operation because he saw these kidneys exposed on the operating table, and could observe the structural change that resulted in consequence of prolonged congestion or obstruction of the ureter due to prolapse.

In a contribution to the Gynecological Section of the American Medical Association, he had shown that nephroptosis causes disease of the female pelvic organs by compressing the ovarian vein and interfering with the return circulation from the pelvis. In this alone he thought was to be found justification for considering this a grave condition, entitled to be placed beyond the pale of palliative treatment.

Such diseases of the kidney as would result from prolonged congestion of the organ or obstruction of the ureter, were to be found in prolapse of the third or fourth degree. Hence in nephroptosis, when long neglected, the kidney may be affected by nephritis, perinephritis, pyelo-nephritis, hydro-nephrosis, pyo-nephrosis, and atrophy. Extravasations under the fibrous capsule, and between it and the fatty capsule, are also met with in cases of long standing.

Operation was not advised for prolapse of the first or second degree, except when the left kidney was found to be in the second degree of prolapse at the time of operation on the right kidney; then the left kidney should be fixed at the same time to obviate the necessity for a second operation later, which would surely be required, because prolapse of that degree is inevitably progressive.

For nephroptosis of the third degree or beyond, operation is necessary because of liability to disease of the kidney resulting at any time, and because of its influence upon the female pelvic organs.

* Read at the first annual meeting of the American Urological Association, at Saratoga, N.Y., June 13th, 1902.

He thought it unnecessary and unwise to deprive the kidney of its protecting fibrous capsule, or to transfix its structure with sutures or muscular bands. Firm adhesion of the kidney with its fibrous capsule intact could be secured, if it is held for a sufficient length of time immovably in contact with the exposed muscles of the back. This can be accomplished by inserting the sustaining sutures under the fibrous capsule only in such manner that its resisting power is utilized to the best advantage.

Two sutures of silk-worm gut are employed, one having three insertions under the fibrous capsule of a half inch in length each, and the other two insertions of the same length. They are brought out through the structures of the back at the upper angle of the wound, just below the last rib, and are tied over a small, flat pad of gauze to prevent cutting and loosening of the suture loop, which would permit the kidney to sag and destroy the chance of adhesion. These sutures are not removed until just as the patient is ready to get out of bed, three weeks after operation.

The author has operated upon 109 cases by this method, in 27 of which both kidneys were fixed at the same time, making a total of 136 nephropexies without a death and without any complications following. So far as he has been able to ascertain, there have been no relapses in any of his cases.

Gynecology and Obstetrics.

... IN CHARGE OF ...

GEO. T. McKEOUGH, M.D., M.R.C.S.(Eng.), AND J. H. LOWE, M.D.

CANCER OF THE UTERUS.

T. WILSON, F.R.C.S., Birmingham, England, has the following paper in the *Journal of Obstetrics and Gynecology of the British Empire*, and which is of much practical interest:

The improved results that have been obtained by Halsted's method of operation in the treatment of cancer of the breast is stimulating gynecologists to the endeavor to find a safe operation that shall be attended by similarly improved results in cancer of the uterus. Mackenrodt (*Zeitsch. für Geburts. und Gynak*, Bd. xlv., No. 1, 1901) states that at the Giessen Congress it was shown that by vaginal hysterectomy a definite cure can be obtained in about 32 to 40 per cent. of operable cases, and in 10 to 12 per cent. of all patients seeking advice for carcinoma of the uterus. These results, as regards cancer, must be considered relatively favorable, but they do not appear satisfactory to many gynecologists. A more radical operation must be based upon ascertained anatomical and pathological facts. As regards the pathology of uterine cancer, it is important to note that the pelvic connective tissue is early implicated, and that often there is early infection of the pelvic glands. The paravaginal connective tissue can be almost completely removed through the vagina with the help in certain cases of a vagino-perineal incision, or of a paravaginal incision, as in Schuchardt's method. By the latter method, Schuchardt has obtained, in a material showing 62 per cent. of operable cases, a definite cure in 24.5 per cent. Mackenrodt states that Schuchardt, in his operations, has paid no attention to the danger of infection of the fresh vaginal wound by cancer, and claims that he himself has obviated this danger by the use of the actual cautery in making the incisions. Ignixtirpation of the uterus through the vagina has given, in Mackenrodt's hands, 42.8 per cent. of lasting cures in a material showing an operable ratio of 92.9 per cent. The difference of 18 per cent. of radical cures between his figures and those of Schuchardt Mackenrodt ascribes to the avoidance of implantation metastasis in his method. Preparatory cauterization of the central portion of the mass does not suffice to prevent cancer infection of the operation wound,

because there is an equal likelihood of infection by pieces derived from the peripheral portions of the growth.

Mackenrodt believes that the complete removal of the pelvic connective tissue through the vagina is a practical impossibility, but he further asserts that in all the cases that have been sufficiently investigated by him a complete operation was anatomically possible and recurrence avoidable. The removal of the whole of the glands, and not only of those that are already obviously diseased, is necessary. Mackenrodt thinks that there is a possibility of obtaining radical cures in more than 50 per cent. of cases of cancer of the uterus, and as in cancer there is everything to gain, and very little to lose by operating, the end to be aimed at is not good statistics, but the definite cure of as many patients as possible.

Influenced by the above considerations, and being assured that a complete removal of the pelvic glands is from their anatomical relations feasible, Mackenrodt has sought for a suitable operative method. He found that the removal of the glands was not possible through a median lower abdominal incision, and the method he has arrived at after careful trial is a subperitoneal one carried out through a horseshoe-shaped incision. The cancerous growth is prepared two days beforehand by curetting and packing with gauze soaked in 10 per cent. formalin solution. The operation is briefly as follows: A vertical incision is made on each side along the lower part of the outer border of the rectus muscle. The lower ends of these incisions are joined by a transverse cut just above the pubes. The attachments of the recti to the pubes are divided. The peritoneum is pushed off unopened from the large abdominal flap, and is cut across above the bladder. The uterus is then drawn up through the opening, and its peritoneal attachment divided all round. The peritoneum separated from the anterior abdominal wall is next sutured to the peritoneum on the posterior pelvic wall from one side to the other. The peritoneal cavity is thus shut off above, while below the pelvis, with its contents, lies widely open. The peritoneum is now pushed off the lateral pelvic wall, and the glands are removed retroperitoneally as high as the bifurcation of the aorta. Finally, the uterus, and as much of the vagina as seems desirable, are removed. If the ureters are implicated in the growth, it is claimed that portions of them can be easily removed, and the ends implanted in the bladder. As regards the treatment of the wound left after removal of the uterus, in the first five patients operated upon in this way the whole enormous cavity was stuffed with iodoform gauze, and the parietal wound closed by sutures. Four out of the five cases died from septic infection that undoubtedly arose from the vagina and the injured rectum. In several other cases the wound was divided into four, the bladder being first sutured to the stump of the sacro-uterine ligaments, and the lower compartment of the wound thus

formed being drained into the vagina. The upper compartment was then divided into three by suturing a fold of peritoneum to each lateral border of the abdominal flap, and these three cavities were separately drained through the abdominal incision by tubes with gauze. After this method of treatment of the wound, healing proceeded smoothly in six cases. One avoidable death took place, being caused by hemorrhage from a cut epigastric artery.

Mackenrodt thinks that, with the above operation, not only can a larger percentage than usual of radical cures be obtained, but the indications for operation can be greatly extended

J. H. L.

“VIVE LA FEMME.”

THE following was written by a lady patient of a well-known surgeon in Toronto last winter and handed to him one morning when making his daily call :

Tell me not in rhythmic numbers
Life is but a surgeon's play,
The body is not dead that slumbers
Under anesthetic sway.

Life is pain and life is sorrow,
Operations are no joke,
But 'tis the remedy assigned
To all the ailing woman-folk.

Headache, backache, both remind us
We may live this life sublime,
And departing leave behind us
Daughters suffering for all time.

Daughters whom perhaps another
Surgeon on life's stormy main,
Clever as his elder brother,
Seeing, operate again.

Let us then be up and doing,
Bearing daughters—woman's fate—
Pain enduring, health pursuing,
Learn to labor and to wait.

Speed the time when little kidlets,
Shall grow on sour apple trees,
Hasten on, ye incubators,
Women wait for such as these.

Our anatomy has been altered
“Woman's ailments” all are past
Doff your hat, O man, our master,
The “New Woman's” found at last !
Alas and alack !

Selected Articles.

THE INTRAVENOUS INJECTION OF COLLARGOLUM (ARGENTUM COLLOIDALE CREDE) IN SEPTIC DISEASES.

BY DR. JOH. MULLER, BUTOW, POMERANIA.

THE author says that the employment of Argentum Colloidale Crede (Collargolum), which has been used with such excellent effects in maladies which we were otherwise hopeless of combating, has long excited his vivid interest. With the exception of Crede's and Wenckebach's articles, comparatively little has as yet appeared in literature. His own observations now include thirty cases; and the results of treatment have been so uniform, and often so striking, that he feels impelled to report them briefly. In almost all cases he administered the remedy as a 1 per cent. intravenous injection. In his large country practice he was not able to observe the cases with the closeness which might be desirable; but after all the chief things were the results.

The first case was that of a woman forty-seven years old, who came under treatment on June 25th, 1901, suffering from a severe bullous erysipelas dependent upon an abscess of the left side of the neck. The entire left side of the neck and face were affected. Twenty-four hours later the right side of the face and the right ear were involved. Not long before Dr. Muller had had a fatal case of erysipelas, and he therefore instituted the Collargolum treatment, injecting 5 grams (1 1-4 drams) into a superficial vein of the left arm. The temperature at the time (noon) was 39.9 degrees C. (103.8 degrees F.); in the evening it was 37.7 degrees C. (99.3 degrees F.), and the next morning 36.7 degrees C. (98.1 degrees F.). The general condition had become good; the erysipelas stopped spreading, and was cured in a few days.

Encouraged by this, Dr. Muller, on July 22nd, injected a boy of five, suffering from a severe pneumonia, in which the crisis had not occurred on the twelfth day, with 2 1-2 grams (37 1-2 grains) of the Collargolum solution in the forenoon. In the evening the boy felt better, was interested in his playthings, and the temperature had fallen. Next day there was renewed pyrexia; another injection was given; the temperature fell to normal, and remained so. There was a rapid recovery.

On July 28th, a girl of twelve suddenly fell sick with headache, chills, vomiting, stiffness of the neck, and somnolence. Next day there was opisthotonus and such rigidity of the spine that the patient had to lay upon her abdomen, spasm of the facial muscles, contractions of the extremities, etc., so that the diagnosis of epidemic cerebrospinal meningitis was made. On the afternoon of July 31st, 4 grams (1 dram) of Collargolum solution were injected. The patient was quieter during the night following, and recognized her parents in the morning. A second injection was given. In the evening the sensorium was free, the temperature was normal, and the opisthotonus was relaxing, so that the patient could lie upon her back again. Rapid progressive improvement. But the paralysis of the muscles of deglutition lasted for eight days longer so that tube nourishment was required. In this case, which appeared perfectly hopeless, both the physician and the parents were delighted with the results of the treatment.

The next case was a phlegmonous erysipelas, occurring in a seventeen year old apprentice, starting from a wound of the leg, and involving the entire limb up to the inguinal region (August 8th). The process stopped even after the first injection, and two further ones caused it to retrogress completely. Only two small incisions of the skin first affected were required for the evacuation of pus.

Another more recent case was that of a woman of twenty-eight, who had a perimetritis with high fever and violent pain fourteen days *post-partum*. The exudation reached the height of the navel in a few days. The general condition was bad. On October 1st, the fourth day of the disease, she was given a Collargolum injection. The next night was a better one, the morning temperature was 37.7 degrees C. (99.3 degrees F.), and the general condition was markedly improved. Nevertheless, on account of the excessive sensitiveness of the patient, and her distrust of the remedy, another injection was refused. A gynecologist was called in consultation, who did not know Collargolum, and did not approve of its use; so that it was only by October 8th, when the exudation had extended to two finger-breadths above the navel, that Muller was allowed even to employ the silver salve. He personally injected twice daily 3 grams (45 grains) of the Unguentum Crede exactly according to rule; and after the fifth injection there was a fall of temperature to the normal. In about a week and a half the exudation disappeared entirely.

All the other cases ran an almost similar course.

The Collargolum injections were employed in two other cases of perimetric exudation, one of parametric infiltration and in four of beginning mastitis in which the fever disappeared four to eight hours after the first injection, and suppuration did not occur in any case. They were also used in an obstinate lymphangitis of

the forearm, for which one injection sufficed; two pararitiums, in which one and two injections, respectively, were enough; and three phlegmons of the extremities, in which one or two injections were sufficient to prevent extension of the destructive process. Of course incisions were requisite in these as in the advanced pararitiums; but surgical interference is no longer our only means of coping with these affections. The injections were employed once in acute articular rheumatism; salicylic treatment for fourteen days gave no results, and two injections sufficed to cause the disease to disappear; in two pleurisies with effusion, where they caused defervescence of the fever and rapid disappearance of the exudate; and one facial erysipelas, in which one injection gave the desired result. There was one appendicitis, injected on the fourth day, with disappearance of the fever at once, and the exudation in a few days; one severe general peritonitis, and one suppurative meningitis, in which the parents sent me word two days after the injection that the child, which was thirteen years old, had recovered consciousness. One appendicitis case received an injection on the fourth day, causing marked lowering of the temperature and improvement of the general condition; on the four following days because the temperature did not entirely disappear, especially at night, there was given a daily injection, which entirely removed the vomiting and meteorism, and greatly diminished the local tenderness; an abscess formed in Douglas's cul-de-sac, which broke spontaneously into the rectum on the ninth day. There were also two cases of phlegmonous angina.

Muller also used the Collargolum injections in two cases after resection of the ribs in consequence of empyema, and found that the offensive odor rapidly disappeared, and recovery occurred much quicker than is usual. He employed it five times in a girl nine years old, who had had resection of the joints and various sequestrotomies done in consequence of a severe tuberculosis of both knees. This patient was emaciated almost to a skeleton, and had persistent fever; after the injections she recovered rapidly, and the wounds healed visibly under his eyes. In febrile (septic) tuberculosis of the lungs also Muller has twice employed the injections with thoroughly satisfactory benefit to the patient; the fever and night-sweats stopped, the appetite improved, and the body weight increased.

With the exception of the chill, which almost regularly occurs from one to four hours after the injection, Muller has seen no trouble occur from this method of employing the Collargolum, though his dosage, especially in children, has been very large.

On the basis of his very favorable experiences, which certainly cannot all have been due to accident, Muller has no doubt that the action of the Collargolum in septic processes is a specific one. He injects it in these diseases with the same confidence with which he

employs antitoxin in diphtheria, and most earnestly recommends the further employment of the soluble silver by intravenous injection to his colleagues.—Abstracted from the *Deutsche Medicinische Wochenschrift* of March 13th, 1902.

CONTRACT MEDICAL ATTENDANCE UPON SICK CLUBS.

BY H. LANGLEY BROWNE, M.B., B.CH. BIRM., F.R.C.S. EDIN.,
West Bromwich.

At the present time it may be of interest to many readers of the *British Medical Journal* if some suggestions were made as to how far the profession should go in its support of or opposition to the present very widely adopted system of contract medical attendance. Most of us will admit that it is perfectly legitimate and fair that the working classes should make some provision to ensure not only sick pay but also medical attendance in times when they are prevented by illness from following their usual employment. Living, as such vast numbers of them do, from hand to mouth, and spending each week the amount of their weekly wages, when illness comes they must run into debt for the necessities of life and for their medical attendance unless they have previously made provision by joining some form of provident society.

The large Friendly Societies, such as the Foresters, Oddfellows, and others, registered and working under definite rules, have very little of the objectionable element in their constitution. They seldom, if ever, employ canvassers, and they are recruited by the efforts of the individual members of the different lodges into which they are divided. They seem to require reform in two ways: First, the sum paid per head for medical attendance is often too small; and secondly, they admit members who are to a certain extent above the class the society was originally intended to benefit, and who are able to pay ordinary medical fees for their attendance. The sums paid per head per annum for medical attendance are generally settled by the local lodge, and are not fixed by the central governing body, and they vary in amount from 3s. to 6s. At the last conference of the Friendly Societies it was admitted that these fees were in many places inadequate, and there seemed to be a general disposition to favor a minimum payment of 5s. per head per annum for adults. If medical men resolved to take no less payment than this, not only for adults but for all members of the juvenile department, they would probably soon succeed in getting the Friendly Societies to grant it. On the second point, the admission or retention of members who are able to pay better fees, the only suggested remedy has been that of a wage limit, and this the Friendly So-

cieties distinctly decline to discuss. A wage limit is by no means so easy a matter to fix as it looks.

The wages earned, perhaps, for many months of a year might exceed the limit, but in all trades there are large variations, and periods during which full time is made are followed by periods of depression, during which the men are only working two or three days in each week, so that to arrive at the rate of weekly wage the amount earned during the whole year would have to be taken into account and averaged. As the Friendly Societies are determined not to entertain the principle of a wage limit, it seems useless for the members of the medical profession to insist upon it. A compromise in the shape of a sliding scale, whereby the minimum rate of 5s. a year paid for medical attendance should be increased to men earning more than a fixed amount of wage, and in proportion to their wages might possibly have a chance of being accepted, as such a plan would only affect the medical fees, and not interfere with the admission to the society and the insurance of payments during illness.

Another form of provident society is often seen, where the employees of some large firm, either by themselves or aided by their employers, unite to form a club for relief in sickness and for providing medical aid. To these clubs no legitimate objection can be taken. There is no canvassing, the finances are controlled by a duly-appointed committee of workmen, and the management of them by this committee is generally excellent. There again arises the question of the capitation fees paid to the medical officer, and here also the minimum fee should not be less than 5s. a year for all employed—men, women, and juveniles. The custom of paying less for females and young persons is quite a wrong one, and unjust to the medical profession, as it is generally these who require the most medical attendance. The appointment of medical officer to these clubs is generally eagerly sought after. If the medical officer is paid entirely by the employers, they, of course, have the right to appoint whom they please, and if the medical officer is paid entirely from the contributions of the men, the same right should be conceded to them, and the appointment should be an annual one. As the men are seldom unanimous in their choice of a doctor, by far the best method is that a list of medical men should be agreed upon every year, and each workman should then make his selection of the doctor he wished to be under for that year. By this method much trouble would be saved to the profession, as such appointments are often the source of disputes between rival medical men.

Another class of clubs are the various provident dispensaries. These are either entirely self-supporting, maintained by charitable subscriptions, or composed of both these elements. They are the means by which medical attendance could be obtained, not only for

men but for women and children of all ages. Properly managed, they are not open to any serious objection, and as they do not exist for any object except for the one of providing medical attendance, they should certainly be restricted to those members of the working classes who are not able to pay ordinary medical fees. Unfortunately this is not always done, and the chief abuse in connection with these dispensaries is the fact that the admission of all classes of patients is permitted, and care is not taken to eliminate unsuitable cases. Admission should always be made subject to the approval of the medical staff. There should be no collectors or canvassers attached to these dispensaries, and the whole of the proceeds after the payment of expenses, provision of drugs, etc., should be allotted to the medical officers.

Insurance societies often have attached to their usual business a medical aid department; but as these societies employ canvassers and collectors, they should not be countenanced by the medical profession. Medical aid associations are open to the same objection, and to a further one, in that they generally pay their medical officers by salary, and retain their profits for their own use, or else they make such deductions from the capitation fees as will ensure a good profit. This practice may be defined as farming or exploiting medical men, and sometimes a very good income is made by doing it.

Private medical clubs are now very numerous, and they are in most cases absolutely unjustifiable on the ground that the worst form of canvassing is there made use of. If a doctor starts or maintains a practice by engaging a collector to canvass for patients for his private club, he is guilty in a far greater degree than is a medical aid association, because the doctor must know that such canvassing is unethical, whereas the question of ethics is never known or thought of by the associations referred to. Such clubs will undoubtedly soon be condemned by the General Medical Council, and it would be well if they were discontinued before any action is taken. A private medical club in which the contributions are paid at the surgery in a district where there is an unopposed practice, and where, therefore, the club can do no harm to any other medical man, is, of course, legitimate.

In conclusion, one may point out that there is no part of one's professional work which gives rise to so much worry as club practice, because of the fact that it is contract work; and however conscientious a doctor may be in his attendance, there will always be some grumbler who will believe that he is not getting the best of it. The glaring evils of club practice may be removed by combination and co-operation between the members of the profession; and there is ample evidence of the growth of a spirit of concord and a regard for ethics in the ranks of our profession which must in time be attended with good results.—*British Med. Journal.*

AGES AT WHICH DIFFERENT DISEASES STOP THE HUMAN MACHINERY.

CHANCES 6 TO 4 THAT CONSUMPTIVES WILL DIE BEFORE AGE FORTY-FIVE — 56 CHANCES TO 44 THAT SUFFERERS FROM HEART DISEASE WILL REACH SIXTY—ODDS IN OTHER CASES —CURIOUS FACTS FROM THE MORTALITY RECORDS OF THE LARGEST LIFE INSURANCE COMPANY IN THE WORLD.

No records of "the natural shocks that flesh is heir to" are kept more scientifically than the data which the life insurance companies accumulate from their own experience. The cause of every death among policyholders is investigated with the utmost care by the medical directors of the company interested. Thousands of physicians, selected for their skill, are attached to the medical departments of the great American life insurance offices. In every community of consequence the companies have physicians on guard to examine into the physical condition of applicants for insurance and to investigate causes of death when called upon to do so.

The Mutual Life Insurance Company of New York, the oldest and largest of the American companies, in fact the largest life insurance company in the world, has prepared some interesting statistics showing the causes of the deaths among its policyholders from the commencement of its business in 1843 to the end of the year 1898, a period of 56 years. The first year only three policyholders died; in 1898 the deaths numbered 3,421. In the 56 years, 46,525 deaths passed under review, from a total of more than 1,000,000 individuals on whom insurance had been written.

As might be expected, the mortality experience of the Mutual Life is a vast storehouse of scientific as well as curious facts. The scientific things may be left for the scientists to study. Popular interest will centre in the things that everybody can understand.

For example, at what ages do certain diseases carry off their victims? That is something that the good citizen who has "sympoms" would like to know.

The Mutual Life's figures can tell nothing of individual cases, of course, but of average or typical cases they tell everything, and here are some of the revelations as interpreted by *The Insurance Press*.

If a person is to die of consumption, the Mutual Life's records show the chances are about 6 to 4 that he will die under age forty-five. Deaths from consumption are divided as follows, by ages: Under forty-five, 59 per cent.; forty-five to sixty, 29 per cent.; above 60, 12 per cent.

If a person is to die of other general diseases, smallpox, measles, diphtheria, erysipelas, cancer, diabetes, etc. (which cause in the aggregate nearly one-eighth of all the deaths), the chances that he will die under age forty-five, between forty-five and sixty, or above sixty, do not differ widely. Thirty per cent. of the deaths from these diseases occur under age forty-five, 36 per cent. between forty-five and sixty, and 34 per cent. above sixty.

If a person is to die of apoplexy, softening of the brain, paralysis, etc., the chances are 55 to 45 that he will live to be sixty or more. Only 12 per cent. of the deaths from these diseases occur under forty-five years; 33 per cent. occur between ages forty-five and sixty; 55 per cent. occur above age sixty.

If a person is to die from some other nervous disease besides apoplexy, paralysis, etc., he will probably pass away before he is sixty. Thirty-five per cent. of the deaths from these causes take place under age forty-five; 38 per cent. between ages forty-five and sixty; 27 per cent. above age sixty.

If a person is to die of heart disease the chances are 56 to 44 that his heart will perform its allotted task until he is sixty. Thus, according to the Mutual Life Insurance Company, he may expect to live to become gray-headed or bald-headed. Not more than 11 per cent. of the deaths from heart disease occur under age forty-five; 33 per cent. between forty-five and sixty; 56 per cent. above sixty.

If a person is to die of pneumonia the chances are 64 to 36 that he will not reach sixty. Twenty-nine per cent. of the deaths from pneumonia occur under forty-five; 35 per cent. between forty-five and sixty, and 36 per cent. above sixty. Other respiratory diseases, such as bronchitis, pleurisy, etc., grant a little longer lease of life. From such causes the deaths under forty-five are 24 per cent.; between forty-five and sixty, 30 per cent.; above sixty, 46 per cent.

If a person is to die of some derangement of the digestive system, the chances are more than two to one that he will not live to be sixty. Thirty per cent. of the deaths from diseases of this class occur during age forty-five; 38 per cent. between ages forty-five and sixty, and 32 per cent. above age sixty.

If a person is to die of Bright's disease he has a fair chance of reaching sixty. Only 16 in 100 of the victims of Bright's disease die under forty-five; 37 in 100 die between forty-five and sixty; the remaining 47 per cent. die after completing threescore years. Other complaints, classified as genito-urinary, are old-age diseases, 77 per cent. of the deaths from such causes occurring at ages above sixty.

If a person is to die from accidental or violent causes, the chances are 86 to 14 that he will not see sixty. Fifty per cent. of the deaths from violent causes occur under forty-five.

If a person is to die from some obscure, ill-defined or unclassified disease, he has 62 chances in 100 of reaching sixty. Human bodies that have been subjected to the wear and tear of threescore years or more are most subject to the kind of break-downs that puzzle the doctors.

If a person is to die of typhoid fever, his summons will probably come before he reaches forty-five. Fully 68 per cent. of the typhoid fever deaths occur under forty-five; another 23 per cent. between ages forty-five and sixty, the remaining 9 per cent. at higher ages.

PERCENTAGE OF DEATHS, BY AGES FROM FAMILIAR DISEASES, AS SHOWN BY FIFTY-SIX YEARS' EXPERIENCE OF THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK.

	Per cent. Under 45.	Per cent. 45 to 60.	Per cent. Above 60.
Consumption.....	59	29	12
Other general diseases.....	30	36	34
Apoplexy, paralysis, softening of brain, etc.	12	33	55
Other nervous diseases.....	35	38	27
Heart disease.....	11	33	56
Pneumonia . . .	29	35	36
Other respiratory diseases..	24	30	46
Digestive diseases.....	30	38	32
Bright's disease.....	16	37	47
Other genito-urinary diseases . . .	..	..	77
Unclassified and ill-defined.....	14	23½	62½
Typhoid fever.....	68	23	9

The data given above relate to all lives, without regard to sex. The essential differences between the sexes in the mortality tables result from the accidents and diseases due to the function of maternity.

Among causes of mortality common to both sexes the widest differences are found in the number of deaths from cancer and from violent causes. The latter causes are far more fatal among males than females. On the other hand, the cancer death-rate among females is much greater than among males.—*Insurance Press*, New York.

A NEW METHOD TO FURTHER THE FLOW OF THE BILE.

BY DR. BLUM, FRANKFORT O. M.

ON a former occasion I gave an account of the various results of my investigations respecting the influence of sebacie salts (soaps) on the secretion of the bile, and I also mentioned that of all soaps oleate of sodium has the greatest effect on the action of the liver. I will not here go into details comparing the results of my various trials made in the course of my researches respecting the in-

fluence of oils and fats on the gall secretion. I wish, however, to state that with dogs oleate of sodium is able to produce bile-flow, and to increase it fourfold in cases of complete or incomplete fistula growing outward from the gall-bladder, if introduced into the stomach in doses of 32 to 80 grains either dissolved or undissolved, and with or without ligature of the ductus choledochus. This result is not caused by any irritation of the mucous membrane of the intestinal canal, and the thereby increased peristaltic action, as even a subcutaneous application of 16 to 32 grs. of oleate of sodium dissolved in water increases the flow of the bile.

Under these circumstances we are justified in the conclusion that the soap in reaching the liver produces a heightened activity of this organ. As a further conclusion we may presume that the oleate of sodium is partly absorbed back into the gall, and with the latter flows into the bowels; there is, however, so far no analytical confirmation of this assumption.

I have not been able to notice any irritations of the urethral organs or the bowels either on administration by the mouth or by subcutaneous injections; there was only an increase of the bile-flow.

Under these circumstances I thought a therapeutic use of oleate of sodium as a cholagogue quite possible and well worth a trial.

Oleate of sodium, as sold in the ordinary trade, and as used for technical purposes, is a most impure preparation: even the so-called pure oleate of sodium does not answer as a medicament. I therefore applied to Messrs. Zimmer & Co., of Frankfort O. M., and induced them to prepare me a chemically pure oleate of sodium. This product, a white substance, melting at a low temperature, has no longer the unpleasant rancid taste; it is easy to take and causes no disturbing after-effects.

To this new preparation Messrs. Zimmer & Co. have given the name of Eunnatrol to distinguish it from those already in use; it is made into pills of 4 grains of Eunnatrol with a chocolate coating.

I used to give the oleate of sodium in gelatine capsules but now prescribe the pills. There is no doubt as to the indications of cholagogues in a great many bilious complaints; of these medicines there is, however, great scarcity.

Stadelmann, in a lecture at the Berlin Medical Society (*vide Berliner Klinische Wochenschrift*, 8196, No. 9 u. 10) was only able to cite salicylate of sodium and the choleinates as certain cholagogues. Oleate of sodium has, however, decided advantages over these; it influences the bile-flow rather more strongly, and can, in the form of Eunnatrol pills, be taken for months without the slightest injurious or unpleasant effect on the intestinal canal or the general condition of the patient. I have had very satis-

factory results with persons with whom an increased secretion of the gall had to be produced, by administration of two doses of 16 grains of Eunatrol per day. All these were people taken ill with cholelithiasis: I prescribed the pills, partly immediately after an attack of colic and partly after the diagnosis had been positively established. I need not mention that the treatment with morphia, proper diet, and the regulation of the stool, were not at the same time neglected. To promote the alvine discharge I generally combined an oil clyster treatment with the administration of the pills; from the clyster one may always expect a certain beneficial effect in cases of gall-stone colic, an effect produced on one hand by the removal of the constipation, on the other, very probably, by the presence of oleate of sodium in the intestinal canal, caused by the saponification of the oil.

I will not enter into the question whether and in how far cholagogues are indicated in cases of gall-stone complaints; a difference would also have to be made between a single acute increase of the bile-flow and a heightened secretion extending over a period of some duration. I have only endeavored to attain the last-mentioned form of influencing the liver, by a continued administration of Eunatrol, and there has never been ill-success so far as no patient ever felt worse after the treatment with Eunatrol than he did before; by far the greater number benefited greatly by it; the attacks become less vigorous and less frequent, the dull pain in intervals grew less acute or disappeared altogether.

Naturally, from observations extending over a period not longer than twelve months, it is not possible to speak of a definite cure of so changeable a complaint as cholelithiasis; when, however, the application of a medicine causes the cessation of attacks, which used to set in with a certain regularity, and, furthermore, a freedom from all the symptoms to which the patient had been subjected, there is no doubt as to the capability of the medicament to produce a beneficial effect. Personally I have obtained good results with Eunatrol, and I consider the medicine well worth a trial in cases of cholelithiasis. No disappointment need be feared as regards the power of Eunatrol to further bile flow. I have also often observed the excretion of fairly large quantities of gravel and small stones.

The pills are best taken : four in the morning, four at night, after meals.

Gift of Osborne House.—King Edward has signalized his coronation by the gift to the nation of Osborne House, one of the favorite residences of Queen Victoria. In the letter announcing the gift the King expresses the hope that the palace may be devoted to national purposes and be converted into a convalescent home for Officers of the navy and army whose health has been impaired in rendering service to their country.

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. XII.

TORONTO, SEPTEMBER, 1902.

NO. 3.

Editorials.

ABNORMAL MEMORY IN DELIRIUM.

IN the *Lancet*, London, July 14th, 1902, Dr. Henry Freeborn recounts a case of abnormal memory in delirium. The patient was a woman of seventy years who had broncho-pneumonia. "Becoming delirious, on the night of March 13th and on the 14th, 1902, she was found to be speaking in a language unknown to those about her. It sounded as if she was repeating some poetry sometimes, or carrying on a conversation at others. She repeated the same poem time after time. The language was found to be Hindustani. On the 14th, in the evening, the Hindustani began to be mixed with English,

and she spoke to, and of, friends of a later date in English, French and German. The patient was born in India, which country she left at the age of three years, and landed in England, after a five months' voyage, before she was four years old. Up to the time she landed she had been under the care of Indian servants, and spoke no English at all, her only language being Hindustani. On her coming to England the ayah was sent back, and she then began to learn English, and from that time had never spoken Hindustani. She apparently, on the 13th, went back in her delirium to her very earliest days, when she spoke again the first language she ever heard. The poem was found to be something which the ayahs are in the habit of repeating to their children, and the conversations were apparently with the native servants, one being recognized as a request that she might be taken to the bazaar to buy sweets. Through the whole delirium there could be recognized a sequence. As time went on, the friends she spoke of were of later date, and she took events in their proper order. She apparently began at the beginning of her life, and went through it, until on March 16th she had reached the time when she was married and had her children growing up—boy and girl."

Dr. C. A. Mercier, who comments on this case in the same number of the *Lancet*, finds that the delirium from which this patient suffered, produced in her memory a condition similar to that which obtains in certain cases of senile insanity. Her whole personality was transported back to her early years, and she lived over again the life of her childhood. She spoke of, and to, friends and relatives of her girlhood; she asked that she might be taken to the bazaar to buy sweets.

In senile insanity Dr. Mercier says the memory of recent events is lacking, but there is an excess of memories derived from long-past experience. It seems, he says, as if structural memories were laid down in the nervous system in strata, the memory of each successive experience overlying the memories of previous experiences; and as if in senile loss of memory, the removal of the upper layers allowed of an over-activity of those that remain. Dr. Mercier says that this hypothesis of the stratification of memories is not put forward as an illuminating one, but simply for what it is worth, as in this very obscure region even a glimmer of light is grateful.

That an old person should recall circumstances which occurred in her life at four years of age is not an unusual occurrence.

Many conscious persons can recollect, by an effort of the will, events or conversations, not always of importance, which occurred in their early childhood. Such a person may also be blessed with a fairly good recollection of more recent events, and as long as the nexus remains intact, applying to the recent as well as the more distant events in life's history, the identity of the individual is recognized by himself. As Reid says, "I cannot remember a thing that happened a year ago without a conviction . . . that I, the same identical person who now remember that event, did then exist." And this personal sense of identity is, doubtless, a strong proof of an individual's sanity—that his mind is *totus teres atque rotundus*. It must be acknowledged, however, that conscious recollections of long-past events tend to become imperfect as age advances, resembling pictures that have become dim with age.

It is said, also, that persons threatened with imminent death experience a search-light illumination of the past, and it is quite likely that much of the incapacity of the memory in ordinary persons may be due to mental sluggishness. Perhaps, also, in the struggle for existence, the conscious, sane individual concentrates his mental powers on the questions cropping out of his every-day life, making but scant effort to recall his past. It would seem, in fact, that all minds—ordinary and extraordinary—receive an excess of images, sounds and other sense impressions, and that while some of these remain adherent to the tablets of memory, to be recalled by efforts of the will, the greater number are allowed to pass into seeming oblivion. The interesting part of the story is that, though forgotten, they are not dead.

One difference between Dr. Freeborn's patient and a senile dement is that the former reviewed the stages of her life (strata of memory) in orderly succession, emerging from her delirium into sanity at a stage of her history corresponding to her real age and actual state.

A senile dement, however, retains his identity as far as certain events in the distant past of his history go, but whole sheets are torn out of the book of his adult and senile life; or, if they remain available (and they may), he lacks the power to throw them on the canvas. Moreover, in the delirious patient the brief time devoted to the operation necessarily prevented an extensive dramatization of her child life. She doubtless reproduced some sense impressions as faithfully as though they had been given back from a phonograph; but in fulness of detail and in the number of the incidents

recorded, a senile dement's efforts are greater, inasmuch as he can devote years to the work which the delirious patient had to compress into a few days.

A third difference is that the delirious patient merely acted as a phonograph in reproducing the nursery songs and chit-chat of sixty-six years ago. A senile dement can do more—he can live in the same house with his nearest relatives, and by his conversation show that he fails to recognize the ties of relationship, all of which is logical on his part, inasmuch as he is mentally living amid the scenes which he inhabited eighty years before, when he had neither wife nor child.

J. J. C.

THE ELECTRIC ENEMA.

THE treatment of patients suffering from atonic stasis of feces by electrical currents (faradic or galvanic) is, if we are to judge by the literature of this subject, very satisfactory. Cases of obstinate constipation are recorded by Erb, showing that when purgatives and ordinary enemata had proved of no avail, the use of the faradic current to the patient's abdomen resulted in the production of copious fecal evacuation. In very difficult cases Erb used an olive-shaped metallic electrode, insulated to the tip, which he introduced two or three inches into the rectum of the patient. This is said to give rise to no sensation, or, at the most, to a slight feeling of pricking and burning, if the cathode is introduced. He says, further, "it is advisable to change the direction of the current several times, in order to allow the cathode which is the more vigorous excitant, to act occasionally upon the rectum. The active contraction of the abdominal muscles should be the measure of the strength of the current; the duration of the sitting varies from three to ten minutes."

In an article which appeared in *La Presse Medicale*, July 5th, 1902, A. Zimmern gives a brief historical review of the applications of electricity in the treatment of obstinate constipation and ileus, and also a detailed account of the electric enema. In explanation of the meaning of this term it may be stated that the galvanic current has been successfully applied in the treatment of cases of constipation, in which the faradic current had failed to give relief. But the galvanic method is not without its perils. As an indication of the inconveniences and even dangers met with in

using the galvanic current in the rectum, Erb says: "If the galvanic current is employed (in the rectum) prolonged closure of the circuit should be avoided, in order to prevent the formation of eschars; repeated changes of polarity should be made with a very short period of closure of the circuit." The caution given by Erb will go to show the motives which induced Boudet, of Paris, who, in cases of intestinal occlusion preferred the galvanic to the faradic current, to introduce an original method of treating such cases, possessing the advantages of the continued current without the risk of causing eschars in the patient's rectum. This method he called "the electric enema." The instruments required in giving the electric enema are: 1, an irrigator large enough to hold two or three quarts of water; 2, a galvanic battery capable of giving a current of at least forty milliamperes; 3, two conducting cords to connect the battery with the patient; 4, an abdominal electrode made of copper or block tin, covered with felt, spongopiline, or, more simply, with several thicknesses of absorbent cotton retained by fine muslin; 5, Boudet's rectal electrode. The latter instrument consists of a hollow metal tube slightly flexible, of about $7\frac{3}{4}$ to $9\frac{3}{4}$ inches in length, covered with hard rubber or ebonite. The hard rubber cover should extend about a half-inch beyond the intra-rectal opening in the metal tube, so that when in use the latter may not come in contact with the rectal mucous membrane. The intra-rectal end of the metal tube is pierced with a hole, so that when connected with the irrigator, it allows water to flow into the rectum. The outer end of the electrode is connected, by a piece of rubber tubing armed with a tap, to the irrigator, and also carries a binding post on the outside for the insertion of a conducting cord to the battery. (The Krouse rectal electrode which appears in the catalogues of American instrument makers, resembles the Boudet electrode and is used for a similar purpose.)

The patient is placed on a sofa or bed, in the dorsal position, with the head unsupported by a pillow and the pelvis slightly raised. The irrigator filled with lukewarm, boiled water, saturated with common salt, is placed at a height of about 2 ft. 6 in. above the level of the patient. The Boudet electrode, previously asepticized, is connected with the irrigator, the tap from which is turned off. The operator introduces the Boudet electrode as deeply as possible into the patient's rectum, carefully following its curves.

Obstacles are occasionally met with in passing the electrode.

For instance, the rectal ampulla may be abnormally dilated, and the true route through it may be hard to find, or a protruding portion of gut, forced there by the pressure of the intestinal mass which is distended with gases, may offer resistance. When the electrode has been introduced, it should be held with one hand. With the other hand the tap on the rubber tube of the irrigator is gently turned on so as to allow the salt water to penetrate very slowly into the intestine. A too rapid flow might irritate the rectum and cause the expulsion of the electrode and the water.

When from 8 to 16 oz. of water have entered the patient's intestine, an abdominal electrode 8 inches in diameter is placed over the abdomen.

The second step in the operation consists in starting the electrical current. The positive pole is connected with the rectal electrode, and the negative pole with the abdominal electrode.

The current should be raised progressively to 10, 20, 30, 40 and 50 milliamperes. During the whole sitting the tap of the irrigator should remain half open, so that the water may enter slowly into the patient's rectum. The perforated end of the rectal electrode is thus immersed in a fluid: the electrical current passes out through the hole in the intra-rectal end of the electrode with the water, and thereby reaches the rectal mucous membrane. The advantages of this electrode are, first, that the metal end does not come into direct contact with the gut, and, therefore, cannot injure its mucous membrane by the electrolytic action, and, second, a much more powerful current may be used without fear of injury as there is always a layer of water between the electrode and the gut. The instrument can also be taken apart and cleaned.

Regarding the question of diagnosis in cases of intestinal occlusion, Erb's opinion is worthy of note. He shows that it is difficult to differentiate occlusion of the intestines by atonic stasis of feces from other varieties of occlusion of the intestines (from invagination, internal strangulation, volvulus, etc.); but thinks that the previous constipation, the demonstration of large masses of feces, the prolonged absence of fever, perhaps previous similar conditions, may render the diagnosis easier.

He adds: "Moreover, electrical excitation of the intestines in the other forms of occlusion would not produce any notably bad effects, and need be omitted only when peritonitis is distinctly developed; indeed, Curci recommends electricity as a differential diagnostic measure in occlusion of the intestines from obscure

causes. If improvement does not occur after one or two sittings, we may assume a mechanical obstruction."

At the present time the galvanic current, applied as Zimmern directs, is the classical method of treating intestinal occlusions when electrical methods suffice.

J. J. C.

CANADIAN MEDICAL ASSOCIATION.

INTENDING delegates to the thirty-fifth annual meeting of the Canadian Medical Association, to be held in Montreal on the 16th, 17th and 18th of September, should take note of the following additional information issued from the Transportation Department. Owing to a clerical error relating to points east of Montreal, the announcement should have read:—If ten (10) or more delegates are in attendance from Quebec City, Megantic and east thereof, holding Standard Convention Certificates, delegates from such points will be issued tickets (free) for return.

A side trip *via* the Richelieu and Ontario Navigation Co. has been arranged for to Quebec City from Montreal, at \$4 for the round trip.

The time limit for delegates attending from points west of Fort William has been extended to the 12th of October, permitting delegates from the West to arrive home by that date.

Delegates may go and return by the Richelieu and Ontario steamers, in the usual way, by asking for that route, and obtaining a Standard Convention Certificate.

The Entertainment Committee, of which Dr. H. S. Birkett is chairman, has arranged the following programme:—Tuesday, a garden party; Wednesday, the Grand Trunk Railway has invited the members of the Association to inspect the Victoria Bridge, and will take them to Lachine, where a lunch will be served; in the evening there will be a smoking concert in the Victoria Rifles' Armoury.

PROVISIONAL PROGRAMME.

The General Meetings and Evening Addresses will be held in No. 111 Lecture Room, Medical Faculty, McGill University. The sections will meet in other lecture rooms of the same building.

FIRST DAY.

9.30 a.m.—General Meeting: Proposal of Members, Notices of Motions etc., Striking of Committees.

10.30 a.m.—Meetings of Sections.

SURGICAL SECTION.

Paper by A. Primrose, Toronto—Filariasis cured by operation.

“ Dr. Perry Goldsmith, Belleville—Hemorrhage in Removal of Adenoids and Tonsils.

“ H. D. Hamilton, Montreal—Complete Occlusion of Posterior Naris.

MEDICAL SECTION.

Paper by John Hunter, Toronto—Pleurisy as associated with Tuberculosis.

“ A. E. Orr, Montreal—On Blood Pressure.

“ G. A. Charlton, Montreal—Anemia due to Toxins.

“ Dr. J. R. Clouston, Huntingdon—The Country Doctor of To-day.

2.00 p.m.—General Meeting : Proposal of Members, etc. followed at

3.00 p.m.—by Address in Surgery by John Stewart, of Halifax, N.S.

5.00 p.m.—Garden Party at the Residence of Mr. Jas. Ross, Peel St.

8.15 p.m.—President's Address, followed by Lantern Demonstration on the Exanthemata, by Dr. Corlett, of Cleveland, Ohio.

SECOND DAY.

8.00 a.m.—Exhibition of Cases at the different hospitals.

Montreal General Hospital : Surgical Cases.

Royal Victoria Hospital : Medical Cases.

Hotel Dieu : Medical Cases.

Notre Dame Hospital : Surgical Cases.

9.30 a.m.—General Meeting : followed by a discussion on “ Diseases of the Gall Bladder and Bile Ducts ”

(a) Medical Diagnosis—Introduced by Dr. A. McPhedran, Toronto.

(b) Medical Treatment—Introduced by Dr. A. D. Blackader, Montreal.

(c) Surgical Diagnosis—Introduced by Dr. Jas. Bell, Montreal.

(d) Surgical Treatment—Introduced by Dr. J. F. W. Ross, Toronto, followed by Dr. G. E. Armstrong, Montreal.

2.00 p.m.

MEDICAL SECTION.

Paper by Dr. J. F. Macdonald, Hopewell, N.S.—On Tuberculosis.

“ Drs. Starr and McKenzie, Toronto—Multiple Sarcoma.

“ Dr. Maude E. Abbott, Montreal—Methods of Classification in Medical Museums.

“ A. D. Shirres, Montreal—Degeneration of Spinal Cord in Anemias, etc.

SURGICAL SECTION.

Paper by G. A. Peters, Toronto—A New Symptom of Intestinal Paralysis in Peritonitis.

“ Dr. Ferguson, Chicago—Removal of Prostate by Perineal Incision.

“ G. E. Armstrong, Montreal—Treatment of Prostatic Hypertrophy by Suprapubic Incision.

“ Dr. J. O. Orr, Toronto—Artificial Astigmatism.

“ Dr. Burnham, Toronto—Sympathetic Ophthalmia.

“ Dr. Monod, Montreal.

“ Dr. A. E. Garrow, Montreal.

OBSTETRIC AND GYNECOLOGIC SECTION.

Paper by Dr. Robinson, Ottawa—Normal Labor.

“ Dr. Laphorn Smith, Montreal.

“ Dr. Lockhart, Montreal.

“ Dr. Chipman, Montreal.

8.15 p.m.—Address in Medicine by Dr. Wm. Osler, Baltimore, followed by Reception in Engineering Building at 9 o'clock.

THIRD DAY.

8.00 a.m.—Exhibition of Cases at the different hospitals :

Montreal General Hospital : Medical Cases.

Royal Victoria Hospital : Surgical Cases.

Hotel Dieu : Surgical Cases.

Notre Dame Hospital : Medical Cases.

9.30 a.m.—General Meeting : Reception of Reports from Committees.

General Business.

10.30 a.m.

Paper by Dr. Robinson, New York—X-Ray Treatment of Cancer.

“ Dr. Girdwood, Montreal—X-Ray as Diagnostic and Curative.

“ W. F. Hamilton, Montreal—X-Ray as Diagnostic Agent in Thoracic Diseases.

“ S. F. Wilson, Montreal—On the Use of High Potentials in X-Ray Work.

The afternoon will be given over to an excursion by rail over Victoria Bridge and thence to Lachine (through the courtesy of the Grand Trunk Railway). From here the Steamer *Duchess of York* will make the trip up Lake St. Louis and run the Lachine Rapids, arriving in the city about 5.30 p.m. (Lunch on board Steamer.) At 8.30 a “Smoker” will be given in the Victoria Rifles' Armoury, Cathcart Street.

Any further information may be secured by applying to the Local Secretary, Dr. C. F. Martin, 33 Durocher St. : Dr. J. Alex. Hutchison, Chairman of the Transportation Committee, 70 McKay St., Montreal ; or to George Elliott, General Secretary, 129 John St., Toronto.

EDITORIAL NOTES.

Treatment of Thrush (Muguet) by Applications of Strong Solutions of Nitrate of Silver.—Certain cases of thrush in babies resist the employment of alkaline lotions, and the glycerine of borax. Dr. G. E. Vladimirov, a member of the extern consulting staff of St. Vladimir's Hospital for Sick Children, Moscow, Russia, after failing to cure severe thrush with the usual remedies, has been prescribing, for the last two years, the application of

2 per cent. solutions of nitrate of silver in such cases. The surgeon first detaches the milk-white elevations of thrush from the tongue and the mucous surface of the cheeks of the patient, by means of pieces of dry cotton wool, or lint. As these elevations are occasionally very adherent, their removal may cause a little hemorrhage, which should be checked by pressure with a plug of cotton wool. After all the milk-white elevations have been removed, the infant is placed on its side and a solution of chloride of sodium is applied to its buccal cavity, in order to neutralize the excess of the silver salt, which is next applied. To prevent movements of suction on the part of the infant, its jaws are separated by the fingers of an assistant, or by the use of a tongue depressor. After the solution of nitrate of silver has been used, the buccal cavity of the infant assumes a whitish color, which enables the surgeon to discover if all the diseased surfaces have been touched. One application a day of this treatment is sufficient. In Dr. Vladimirov's experience, from one to three treatments of this sort suffice to effect a complete cure of thrush.

The Causes of Death in Diphtheria.—In a paper read before the Society of Pediatrics, Paris, June 17th, 1902, Drs. Barbier and Alquier reported on causes of death in diphtheria from autopsies which they had made on the bodies of forty-five children, who succumbed at different stages of the disease. The most frequent cause of death was cardiac thrombosis, which was found in 50 per cent. of the cases, the thrombus almost always being in the right side of the heart. A bacteriological examination of the blood clot was made in twelve cases, and yielded a negative result in four cases: the bacillus diphtheriæ was found in four cases; the streptococcus alone in two cases; the staphylococcus alone in one case; the streptococcus and the bacillus diphtheriæ in one case. Cardiac thrombosis appears to be frequent in severe forms of diphtheria (associated forms or simple ones). It appears during convalescence, nine to fifteen days after the disappearance of the false membranes. The patient dies suddenly, death being sometimes preceded by pallor of the face, cyanosis, agitation and great distress. A remarkable find in the *post-mortems* was the high percentage of latent tuberculosis. Tubercular lesions were found in eighteen cases (40 per cent.). In 25 per cent. there were recent tubercular attacks developed under the influence of diphtheria. But although the tuberculosis got worse under the influence of

diphtheria, it did not originate cardiac thrombosis, for the latter coexisted with tuberculosis in only four cases.

A Contribution to the Study of Gonorrhea in Women.—

Dr. Etesse, in a recently published thesis, studies the effects of the infection of Skene's glands with the gonococcus in causing chronicity of gonorrhea in the female patient. These glands, which are regarded as homologues of the seminal vesicles, are found on each side of and below the vulvar segment of the female urethra, their orifices opening right and left, one-tenth to two-tenths of an inch inside the free border of the meatus urinarius. They are almost as frequently infected with the gonorrheal virus as the glands of Bartholin. The infection of these glands may happen primarily, but generally it is caused by the gonorrheal discharge bathing the parts around the meatus urinarius in cases of urethritis in the female. The disease is generally chronic, rarely acute, and causes no subjective symptoms, so that the surgeon must seek for it as his attention will not be called to it by the patient. Once ensconced in Skene's glands the gonococcus may cause repeated infections of the patient's urethra, as well as proving the occasion of numerous attacks of gonorrhea among her male visitors. In Dr. Etesse's opinion the only efficacious treatment is destruction of the glands of Skene in the patient by the use of the galvano-cautery, as ordinary topical treatment yields only uncertain results.

Intestinal Obstruction successfully treated by the Administration of a large Dose of Metallic Mercury.—McKean Harrison reports in the *British Medical Journal*, April 26th, 1902, two cases of acute intestinal obstruction treated by the administration of half a pound of metallic mercury. His first patient was a man of sixty, who had been suffering from intestinal obstruction for eight days. A few hours after he had swallowed the mercury a considerable improvement was noticed in his general condition, and twenty-four hours afterwards he passed a large stool. In his second case, a man of eighty, a similar result was obtained, only that the symptoms were more alarming and the effect of the mercury more rapid, the first stool being voided a few hours after the mercury had been taken. No signs of ptyalism or pain were observed in either case. The mercury was passed per rectum nine or ten days after it had been taken. Watson (*Practice of Physic*) mentions that in a case in which half a pound of quicksilver had been administered, two ounces and a half of the metal were voided

unchanged five weeks afterwards. He does not favor this procedure, however, giving as reasons that the obstacle may be in an ascending coil of intestine, and that it has often done mischief and seldom or never done any good.

Estimation of the Capillary Circulation of the Skin.—Drs. Hallion and Laignel-Lavastine have presented to the Society of Biology, Paris, June 21st, a report embodying their observations on the production of the white spot—mechanical anemia of the skin—by the use of slight pressure. Their subjects were examined when in the recumbent posture, the temperature of the atmosphere being $62\frac{3}{4}$ degs. F., and the pressure applied with the thumb for three seconds in the first interosseous space, dorsal surface. In aged subjects, those having arterio-sclerosis, Raynaud's disease, malignant asthenia, the duration of the white spot was considerably lengthened. In others having fevers, pneumonia, typhoid fever, Basedow's disease, erythromelalgia, its duration was shortened. The pulse in the fingers was studied comparatively by the use of Halion-Comte's digital plethysphygmograph. The authors state that the results obtained by the latter method were such as, for theoretical reasons, might have been expected, and coincided with the activity of the capillary circulation.

Value of Alcohol in the Disinfection of the Hands.—In an article which appears in *Berlin. Klin. Wochenschr.*, Schaeffer recommends the following method of disinfecting the hands: Energetic washing and rubbing of the hands for five minutes with soft soap, in water as hot as can be borne; scrubbing of the nails; drying of the hands with a hot, sterile compress, vigorously applied to the epiderm; washing and brushing from three to five minutes in strong alcohol; rinsing in an aseptic liquid (sterilized water, or better, a 1 per cent. aqueous solution of mercuric chloride).

Mortality among German Military and Naval Officers.—The military life insurance company, in which all the officers of the German army and navy are insured, has just published an interesting table, showing the mortality among these classes. In 1901, the mean age at death was 46 years and 6 months. Of 297 deaths among officers, 42 died a violent death, 29 suicided, 4 were assassinated, 9 died from accidents. The greater part of the remaining deaths were due to nervous diseases or to tuberculosis. J. J. C.

The Weather.—The newspapers certainly seem to have kept in type this season, under the caption of weather probabilities, the

word "thunderstorms." To the peculiar position in relation to each other of several of the planets, astronomers tell us, is largely due the unusual number of electrical storms by which we have been visited, in all their violence and consequent destructfulness this summer. Anxious to learn the number of deaths occasioned by lightning in Ontario during recent years, the latest information that could be obtained was a report for 1900, which shows that not a single death occurred that year (in Ontario) directly as the consequence of persons being struck by lightning. The statistics for 1901-2 are as yet incomplete. Surely we may be pardoned for referring to that forbidden subject—the weather, when the *Literary Digest* inserts in a recent issue a very amusing cartoon representing Morgan sitting in an aereobole, upon the side of which is inscribed: "Spot cash for old and second-hand industries." Below, on the roof of his house, which is floating away, so great has been the rainstorm, with his family, little Johnnie and the cat, sits the farmer, who remarks as he gazes skyward, "Pierpont, now's your chance to organize a *rain* trust and curtail production."

Attracted by Morbid Curiosity.—Would that the days of capital punishment were at an end, not that those compelled to suffer do not deserve their fate, and the ends of justice seem best served, perhaps, in this decisive and final way! Those called upon to perform the duties connected with "a hanging," the form in which capital punishment is administered at present in Canada, are certainly a class by themselves; those who form the spectators, present either out of curiosity, for scientific purposes, or reporting for the daily newspapers are surely ever after haunted by the memory of that awful sight, or are hardened and rendered a shade less finely discriminative in their taste in the selection of experiences. As for the newspapers, in the name of common decency, why print such horrors, giving to a gaping public every nauseating detail of the affair, with photo of the criminal inserted between the paragraphs? The contemplation of a human being suspended twixt heaven and earth is not an ennobling pastime. Why detain the moment?

The Passing of the Beard.—"He that hath a beard is more than a youth: he that hath no beard is less than a man," said one of Shakespeare's fair women; but in this century, when kisses are said to be microbe-transferring agents, need we marvel that the powers that be, in the shape of the German Emperor, has decreed

that those among his lieges who practice medicine and surgery shall cut off their beards? A writer in the *British Medical Journal* says: "So sweeping an order sounds rather improbable, even as coming from a potentate whose motto is *Summa lex regis voluntas*. But the German Emperor, like the Prophet Habakkuk, is capable of anything when he is bitten by an idea."

W. A. Y.

PERSONALS.

DR. D. J. GIBB WISHART spent the month of August on his island at the Madawaska Club, Go-Home Bay.

WE are authorized by Dr. A. M. Rosebrugh to state that, hereafter, he purposes devoting himself more exclusively to the medical treatment of alcoholism, and more especially to the home-treatment of the milder forms of inebriety. Dr. Rosebrugh retired from his position at St. Michael's Hospital a few months ago, so as to afford him more time for the study and treatment of alcoholism, as well as to promote the passage of the proposed Bill for the treatment of inebriates. There is surely a wide field for usefulness in this department of medicine, and the doctor has our best wishes in connection therewith. Dr. Rosebrugh's address is Room 12, Confederation Building, Toronto.

WE wish to draw the attention of our readers to the medical practices offered for sale from month to month by the "Canadian Medical Exchange," among our advertisting pages. We know of no way anyone seeking a medical practice could secure the same with so much facility and certainty of fulfilling their desires as by enlisting the services of Dr. Hamill, who has made a specialty of this line of work for ten years with remarkable ability and success. This applies with equal force to those desiring to sell their practices; in fact, the "Canadian Medical Exchange," under his able management, offers a short cut to physicians to buy and sell quickly, and the choicest offers appear monthly in this journal.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

PROVISION FOR LEPEHS IN THE UNITED STATES.

DEAR SIR,—I read in the report on the Lazaretto, Tracadie, New Brunswick, of your Honorable Minister of Agriculture for the Dominion of Canada, for the year ended October 31st, 1900, as quoted by Dr. Eblers, the editor of "Lepra," in Vol. II., fasc. 4, page 234: "Dr. A. C. Smith, in his Annual Report on the leper hospital at Tracadie, N.B., stated: ' . . . The citizens of the neighboring republic are awakening to the necessity of a National Leper Asylum. *Investigation which has hitherto moved in a more or less academic orbit, commandeered by pamphleteers, has entered into a definitely practical phase.*' " The lines which I have italicized are evidently Dr. Smith's for they are under quotation marks by Dr. Eblers.

Will you allow me to inform Dr. Smith that our bill for a National Leper Law (Home) now before the American Congress, is the one which I myself drafted. It is the only one, excepting that introduced by delegate Wilcox for a Hawaiian leper law. Senator Platt, of New York, introduced it. It is endorsed by the U. S. Senators of California, Oregon, Louisiana, Minnesota, West Virginia, Kansas, North Dakota, Michigan, Wisconsin, Pennsylvania, South Carolina, Iowa, etc., and by Governor Heard, of Louisiana. It has the promised support of a majority of the Senate Committee on Public Health and National Quarantine, and the House Committee on Interstate and Foreign Commerce, to which it was referred. Senator Perkins, of California, and delegate Wilcox, Hawaii, have agreed to modify the second section of their Hawaiian bill, so as not to conflict with our Platt-Wanger bill. You see, sir, that our work has every assurance of success.

A copy of this bill, as printed by the Senate, was sent some time ago to your chief quarantine officer, the distinguished Dr. Montizambert, of Ottawa. A reference to it would show the efficiency and practicability of the work commandeered by the "pamphleteers," at which some one seemed to turn up his *more or less academic* nose.

ALBERT S. ASHMEAD, M.D.

❧ *Items of Interest.* ❧

Professor Albert von Kolliker, the anatomist, has resigned from the chair of anatomy at the University of Wurzburg, which he occupied for fifty-five years.

An International Tuberculosis Congress.—An international conference on tuberculosis under the auspices of the Central International Office for the Prevention of Consumption, will be held in Berlin from October 22 to 26.

Bequests by Dr. Klock.—By the will of the late Dr. Klock, one of the foremost physicians of Ottawa, the General Protestant Hospital of that city receives his valuable x-ray apparatus. His library will be divided between the Lady Stanley Institute and the Maternity Hospital.

Laval Professors Attending the Continental Congress.—Two professors of Laval University, Montreal, sailed *en route* to Rome, August 21st, to attend the fourth international congress of the professors of gynecology and obstetrics. They are Dr. L. N. Delorme and Dr. M. T. Brennan, and both will read papers.

To Improve the Breed of Royalty.—A dispatch to a London news agency from Rome, probably manufactured for summer use, announces that the Pope has notified the Catholic reigning houses of Europe that no more dispensations for consanguineous marriages will be granted. It is the wish of the Pope, says the dispatch, that royal personages contract marriages outside of royal families in order to put a stop to the tendency to physical and mental decadency now so apparent.

A Wireless Ambulance Call.—While the *Kaiser Wilhelm der Grosse* was making her way to New York last week, one of the passengers was taken ill with symptoms of appendicitis. An operation was indicated, but as land was so near it was deemed advisable to wait until the ship arrived. Accordingly, a wireless message was sent while the boat was still fifty miles away, and in response to the call an ambulance was in waiting when the pier was reached. The patient, a son of former Prime Minister di Rudini of Italy, was taken to hospital, operated upon, and is now convalescent.—*Med. Record.*

Toronto's Health for July.—The return of vital statistics for July shows 425 births, 222 marriages and 245 deaths, compared with 352 births, 241 marriages and 303 deaths for the same month last year. The total births to date for 1902 are 2,899, an increase

of 318 over the figures for 1901. There is an increase of 144 in the total number of marriages, 1,321, compared with 1,177 last year. The deaths show a decrease, there being only 1,899 for the present year, and 2,101 last year at the same date. The deaths for the month from contagious diseases were: scarlatina 2, diphtheria 8, measles 1, typhoid 3, and tuberculous 27.

Complaints of British Transport Service.—Captain Shields, medical officer of a transport carrying returning troops from South Africa to Melbourne, made a report in which he condemned the service in the strongest terms. He said that "the overcrowding of the ship was shameful and scandalous and without consideration for health or loss of life. The air was poisonous and foul, and the decks were always wet, causing pleurisy and pneumonia." He said, further, that the supply of medicine on board was absurdly small, and that the condition of the ship was directly responsible for the epidemic and deaths on board.—*Med. Record.*

Appointments.—Dr. Goldwin Howland, of Toronto University, has been appointed registrar of the National Hospital for Nervous Diseases, London, England. Dr. A. J. Lomas, a recent graduate of McGill University, has been appointed surgeon on the steamship *Botanga*, which left England, July 17th, for West Africa. Dr. Telesphore Parizeau has been appointed Professor of Pathology and Surgery at Laval University, Montreal, to succeed the late Dr. J. A. S. Brunelle. Dr. Parizeau is a graduate of Laval and after receiving his degree, spent several years in the hospitals of Paris. He is a member of the visiting staff of Notre Dame Hospital.

Removing Toronto Insane Asylum.—The Hon. Mr. Stratton, the Provincial Secretary of Ontario, has in contemplation the removal of the Toronto Asylum for the Insane to a point some miles beyond the city limits. Although the present site is large it is not considered sufficient for the employment of the eight hundred inmates; and the proposal is to secure a farm of three hundred acres and erect new buildings on the cottage plan. The present property is in the centre of the western section of the city and, owing to the tendency of the city to grow westwards, has increased so much in value that the province would lose nothing and the inmates gain much by the proposed change.

An Appreciation of Lister.—The following editorial note, under the caption, "Long Live the King," which appeared in the *Sun* of August 10, needs no comment: "The coronation of Edward yesterday had a far broader significance than the crowning of a mere titular monarch. It was the coronation of modern antiseptic surgery. The Englishman on whose head the crown was placed in Westminster Abbey was really Joseph Lister—the head from which came the discoveries in the application of the antiseptic treatment by which the life of Edward and the lives of many thousands of other sufferers apparently doomed to death have been saved. Long live the King."—*Med. Record.*

Diabetes in Pregnancy : Large Fetus.—Chambrelent observed dystocia from size of the fetus in two patients where diabetes developed during pregnancy. There was no history of gigantism, and no cachexia in either case. In the first patient glycosuria appeared in the fourth, in the second during the sixth month. Appropriate medical treatment proved beneficial to the mothers, but the fetus died shortly before labor in both cases. In both cases it weighed over eleven pounds, and delivery proved very difficult, especially when the shoulders came down. The dystocia was mainly due to the increase in the diameters of the trunk.—*British Medical Journal*.

Unborn Child Heir with Other Children.—An unusual point of law, the first of its kind ever raised in Canada, and it is stated the second on record, has recently been pronounced on and decided at Toronto by Mr. Justice Lount. A farmer in the western part of Ontario died, leaving a widow and four children. A fifth child was born four months afterward. The case turned on the division of a \$2,000 insurance policy, which according to the will was to be turned over to the widow and children in equal shares. The administrators applied to the court for advice as to whether or not the infant child born after the death of her father was entitled to a share in the insurance money. His Lordship ruled that a child, although unborn, is still a child in law, and takes rank as a child living at the death of its parent.

Canadian Criminal Statistics.—A report on criminal statistics for the year ending September 30th, 1901, has been prepared by the Dominion statistician. The number of charges for indictable offences was 128 less in 1901 than in 1900, being 8,291 in the former year and 8,419 in the latter. The convictions numbered 5,638, or 130 less than in 1900. The effect of the abuse of alcohol on crime may be seen from the following: In 1899 the immoderate drinkers represented 33.5 per cent. of the convicted criminals; in 1900, 29.1 per cent.; in 1901, nearly 30 per cent. About one-third of the criminals were persons addicted to drinking liquors. Regarding juvenile crimes, while there has been a satisfactory decrease in the female sex, the male sex has increased disproportionately. This is the most serious fact of the records of crime in Canada.

Atmospheric Cleansing by Snowfall.—Snow, and probably rain, rank high among Nature's methods for the purification of the atmosphere. The air of cities is rich in germs, a certain proportion of which are pathogenic, and apart from microbes the atmosphere is more or less heavily laden with minute organic particles which irritate and otherwise damage the respiratory tract. Some experiments recently carried out by the Chicago Board of Health illustrate this cleansing action very well. Culture plates exposed on January 18th gave colonies varying in number from 630 to 1,050. On the 21st snow fell to the extent of 0.28 of an

inch, and the experiment was repeated on the 22nd, when the number of colonies obtained fell to between 66 and 180, so that the atmosphere was nearly 90 per cent. purer after the snowfall than it was before.—*Medical Press*.

Heavy Fees from Royalty.—Max O'Rell is quoted from Paris as saying: It is a good thing to be a physician, to be called to the bedside of a royal patient. For his four weeks' attendance at Sandringham, prior to the recovery of the King from typhoid fever, in 1871, Sir William Gull received \$50,000. Twice this amount was paid to Sir Morell MacKenzie for his treatment of the late Emperor Frederick. The doctors who attended Queen Victoria in her last illness received 2,000 guineas each; while Dr. Lapponi's skill in removing a cyst from the Pope's side a few years ago was recompensed with \$2,500. Dr. Dinsdale for his journey to St. Petersburg and vaccination of the Empress Catharine II., received \$50,000 as his fee—\$25,000 for travelling expenses and a life pension of \$2,500 a year. One hundred thousand dollars will not pay the bill that King Edward must settle for his late illness and operation.

St. Michael's Endorses the Inebriety Bill.—The following memorial regarding the treatment of inebriates, and regarding Dr. A. M. Rosebrugh's connection therewith, was signed by the twenty-one visiting physicians and surgeons of St. Michael's Hospital, a little over twelve months ago, on the occasion of the retirement of Dr. Rosebrugh from the visiting staff of that institution:—*Whereas*, After eight and a half years' service as one of the attending physicians of St. Michael's Hospital, Toronto, Dr. A. M. Rosebrugh feels compelled to retire therefrom to enable him to devote more time to the study and treatment of inebriety and the adoption of the proposed Bill and its economic treatment: *Therefore, Resolved*, That in view of Dr. Rosebrugh's long and faithful service at the hospital, and also in view of his devotion to the interests of the unfortunate inebriate, we, the attending staff of the hospital, desire to place on record our appreciation of those services, and to wish him every success in the line of work he has mapped out for himself. *Resolved*, secondly, That we take this opportunity of expressing our unqualified approval of the proposed Bill, now under the consideration of the Ontario Government, for the economic treatment of pauper inebriates, and we would be much gratified if members of the medical profession could see their way to an endeavor to bring their personal influence to bear on behalf of this important measure, and more particularly with a view of securing the co-operation of their representatives in the Ontario Legislature.

Medical Experts in the Law Courts.—The trial of Professor Dührssen, Berlin, Germany, has directed attention to the state of the law relative to medical evidence given before courts of justice. As a general rule the medical officer of health of the district is

ex officio medical expert in the courts, but in some of the larger towns special medical officers have been appointed for this duty. In cases of considerable importance and in appeal cases, recourse is had to the provincial board which exists in each province (Provincial Medicinal-Collegium) composed of professors of the university of the province, together with Government medical officers and others, and to a central board in Berlin (Wissenschaftliche Deputation für das Medicinalwesen) composed of professors of Berlin University only. The professional opinions given by the authority last named have a great influence on the decisions of the courts, for the judges believe that no expert is more competent in medical questions than this Board, and its opinion is very seldom disregarded. Since the Duhrssen trial, however, some medical journals have pointed out that, although the Board is composed of the leading medical men of Berlin, its formally expressed opinions nevertheless do not possess the weight and importance with which they are usually credited. When in a given case the opinion of the Board is asked by a public prosecutor, or by a court of justice, the President of the Board, as a rule, entrusts the matter to a member who is a specialist in that department. If, for instance, a surgical case is under consideration, it is one of the surgeons, or if it is a gynecological case it is the gynecologist who draws up the report. There is no discussion of the matter by the whole Board; when the report is prepared it is signed by the other members, but in reality the opinion of the Board is only the opinion of one member, whose views may sometimes be out-of-date, and who is by no means superior to other specialists who may be called by the other side. Moreover, the opinion of the Board, or of the member who acts in its name, has to be based on written statements, for the patient is very seldom examined with a view to the preparation of the report. It is also quite unusual for the members of the Boards to attend a court as witnesses, or to undergo cross-examination; a member of the Provincial Board was present at the trial of Professor Duhrssen but the Central Board was not represented at all. Some medical journals now propose that this system should be altered by abolishing the Boards, and that in cases of considerable importance the opinions of the most competent men in the respective branches should be asked, as they would be required to appear in court, and after being sworn as experts might be cross-examined like other witnesses.—*Lancet*.

The Physician's Library.

BOOK REVIEWS.

The Colonials. By ALLEN FRENCH. Toronto: William Briggs. 1902.

Although this tale is deftly told, some parts of the framework do not hang well together, making, in fact, serious demands on the reader's credulity. That a girl of fifteen, who had been raised in the woods, and retained the use of her senses, could, in two years, forget the face and voice of a man who had given her the worst of insults, is simply absurd. Yet we are expected to believe that the heroine, Alice Tudor, who when in Canada in 1772 had been brutally insulted by Captain Sotheran, failed to recognize her assailant in Boston in 1774, and in fact received him as a friend and suitor. In view of the fact that Sotheran was instantly recognized by Frank Ellery, whose opportunities for seeing Sotheran had been no better than those enjoyed by Alice Tudor—this part of the tale seems very improbable. Apart from this lack of the ordinary powers of observation, Alice Tudor is a very attractive personality. Beautiful, pure-minded, true-hearted, she lives a romantic, eventful life, and meets her manifest destiny in becoming the bride of the American, Frank Ellery.

The character of the hero, Frank Ellery, shows to greatest advantage in Book I., in which he is described as a hunter battling with Indians in the forests of Canada. On his return to Boston, Ellery sides with the Whigs and, when the revolutionary war begins, fights against the British troops. The author endeavors to enhance the minor part played by Ellery as a soldier by exalting the brilliancy of his swordsmanship. One wonders how Ellery could have acquired any skill in fencing. He might, it is true, have taken lessons in fencing before he fled from Boston when a lad of eighteen. On the other hand, the author represents Ellery as sickly and almost consumptive at that period of his life, so that it would not be likely that he would spend much time in the fencing academy, and would, therefore, not be a good fencer when he left Boston. His three years of hunting life in the Canadian forests would improve his general health, develop him as an all-round athlete, make him a rifleman, skilful with the tomahawk and hunting-

knife, but would be sterile in developing any skill which he may have possessed, when a boy, with the short sword. To make him suddenly so accomplished a swordsman, so much a master of *carte* and *tierce*, as to defeat with ease and certainty a practised duellist, on two occasions, is a tremendous appeal to one's gullability, and is as far removed from reality as the Flying Dutchman's escape by swimming from Portsmouth Harbor, as recounted in "The Flying Dutchman." As a word-panorama, depicting scenes and conditions of life in Canada and the American colonies one hundred and twenty-seven years ago, before the woodman's axe had swept away the picturesque forests of the land, "The Colonials" will be read by young and old with absorbing interest.

J. J. C.

Clinical Lectures on Neurasthenia. By THOMAS D. SAVILL, M.D.
London: Henry J. Glaisher, 57 Wigmore Street West. Second edition.

This is a really good series of lectures. The author speaks from clinical experience of a very large number of cases. This experience has been very largely gained in the Paddington Infirmary, where, as the author points out, a very great number of patients in all stages of nervous disease can be studied to great advantage, as the patients are usually permanent residents and thus their various symptoms can be watched under known conditions and not, as in the case of hospital patients, only for a limited period and in the out-patient class under unknown conditions of home life; a most useful chapter is given on clinical investigation and a very helpful scheme for case-taking is given. In treating of the pathology of functional disorders a somewhat startling theory is propounded in regard to chorea. The author has long believed that chorea is due to a specific microbe and that it is communicated from one child to another not by "imitation," but by infection, and very plausible reasons are given for this theory, and a very plain and clear difference is given between hysteria and neurasthenia—two distinct conditions which are too often confounded together. The relations of the neurasthenic state and insanity are very fully gone into and the importance of early treatment thoroughly advocated. A large number of cases, illustrating the many forms of nervous disorders, are given and are most helpful to the reader. In considering the treatment advisable in the different conditions giving rise to neurasthenia it is pleasing to notice that the "soothing influence of a pipe" is highly spoken of in impending neurasthenia. The practitioner must be left to follow out the very excellent and full lines of treatment from the lectures themselves. The course of lectures ought to be read by every practitioner, as it is a branch of the art of medicine too often neglected. It is too much the case that this class of disease is treated as trivial and dismissed by the doctor as merely "nerves." It is surely the duty of

every medical man to fit himself to cope with all kinds of ailments, and in view of the suffering of the patient and his or her friends this is not a trivial complaint, and not allow patients to drift into the various forms of charlatanism which are always ready to fatten on these unfortunate and easily deluded sufferers.

J. M.

A Manual of Instruction in the Principles of Prompt Aid to the Injured. Including a chapter on Hygiene and the Drill Regulations for the Hospital Corps, U.S.A. Designed for Military and Civil use by ALVAH H. DOTY, M.D., Health Officer of the Port of New York, late Major and Surgeon, Ninth Regiment N. G. S., N. Y., late Attending Surgeon to Bellevue Dispensary, New York. Fourth edition, revised and enlarged. New York: D. Appleton & Company. London: 25 Bedford Street. 1902.

The fourth edition of this little work of 300 pages on "Prompt Aid to the Injured" presents many changes and additions. The chapter on "Disinfection" has been re-written, in order to make it in harmony with the results obtained by recent scientific investigation in this direction. The hospital corps drill regulations now used by the United States army have been introduced, and many other minor changes.

The book is well designed to instruct those desirous of knowing what course to pursue in emergencies in order that the sick or injured may be temporarily relieved. Special attention has been given to information necessary for the instruction of ambulance corps connected with the different military organizations. It is also a useful little work in minor surgery and bandaging for the use of house surgeons, dressers, junior practitioners and nurses. Considerable space has been devoted to "Anatomy and Physiology" in order to make the subject-matter better understood by non-medical persons. Lay synonyms have been introduced as far as possible for more complex medical terms.

The book is largely illustrated and is well arranged as a ready reference for use in the treatment of accidents and emergencies.

E. H. A.

Practical Dietetics, with special reference to Diet in Disease. By W. G. THOMPSON, M.D., Professor of Medicine in the Cornell University Medical College in New York City; Visiting Physician to the Presbyterian and Bellevue Hospitals. Second edition, enlarged and thoroughly revised. New York: D. Appleton & Company. 1902.

The dietetic treatment of disease is fast approaching its proper place in lectures delivered in the various medical schools at the present time. Some teachers give a series of lectures on "diet in

disease" which cannot but be of inestimable value to the student, and we hope soon to see this subject more fully dilated upon by the teaching staff of every medical school. Dr. Thompson has thoroughly revised the present edition, and rewritten it in part, adding also over thirty pages of new matter. The sections on Diet in Disease have also been enlarged, and as in the previous edition developed with special reference to their practical application for the sick. The author, besides giving the usual hospital diet tables, gives a description of the various cures, as the Fruit Cure, the Grape Cure, the Meat and Hot Water Cure, the Dry Cure, Athletes' Diet, Brain Workers' Diet, etc. The chapter on Infants' Diet is especially interesting, as is also that on School Children's Diet. The work concludes with an appendix, containing a long list of preparations of milk, meat, and eggs, which are very useful to the general practitioner. This is undoubtedly as good a work on dietetics as has ever been published. A. J. H.

A System of Physiologic Therapeutics. A Practical Exposition of the Methods, other than Drug Giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. Vol. IX., Hydrotherapy, Thermotherapy, Heliotherapy and Phototherapy, by Dr. Wilhelm Winternitz, assisted by Dr. Alois Strasser and Dr. B. Buxbaum, of Vienna; and Balneology and Crounotherapy, by Dr. E. Heinrich Kisch, of Prague University. Translated by Augustus A. Eshner, M.D., of Philadelphia. With notes by Guy Hinsdale, A.M., M.D., and different chapters by A. C. Peale, M.D., J. H. Kellogg, M.D., and Harvey Cushing, M.D. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1902. Canadian Agents: The Chandler & Massey Co., Limited, Toronto and Montreal.

Vol. IX. of this series has been delayed for some time by the publishers to permit the insertion of several supplemental chapters on important subjects, and an appendix designed to bring the material and the illustration of new methods and new instruments "right down to date." The volume is certainly in itself a most complete work on the subjects of hydrotherapy, thermotherapy, heliotherapy and phototherapy. We may say that we know of no other book which enters into such detail, or at such length on the subjects named; and we think that it will pay any physician to buy this one volume anyway (as we presume he can do), even though he may not desire to possess the entire set.

The section devoted to mineral waters and their uses is exceedingly interesting. This part of the volume goes fully into the

constitution and general effects of mineral baths, acro-thermal baths, acid and brine baths, sea baths, sulphur baths, iron baths, gas baths, peat and mud baths, mineral steam baths and medicated baths. To the different writers the general profession owe a considerable debt of gratitude for the material placed at their disposal. The volume is certainly one of the best of the series.

Text-Book of Physiological and Pathological Chemistry. By G. BUNGE, Professor of Physiological Chemistry at Bale. Second English edition. Translated from the fourth German edition by FLORENCE A. STARLING, and edited by ERNEST H. STARLING, M.D., F.R.S., Professor of Physiology in University College, London. Philadelphia: P. Blakistons Son & Co., 1012 Walnut Street. 1902. Canadian Agents: The Chandler Massey Co., Limited, Toronto and Montreal. Price, \$3.00 net.

This volume is based upon a series of lectures delivered by Professor Bunge on Physiological Chemistry. "Representing, as they do, the ideas which have produced throughout many years discoveries of fundamental importance in the school of Schmiedeberg, they have served to spread the method of thought of that school, and to render more effective the work of men in other laboratories." Physiological Chemistry is, to most at least, fairly dry reading, so that an author upon that subject must, of necessity avoid being too flat and tiresome, and hold his reader's attention by being as lucid as possible. This Dr. and Mrs. Starling have succeeded fairly well in doing, the volume under review being full of thoroughly interesting matter, and yet not too scientific. The work of translation from the German has been very satisfactorily done, making the text readable without in any way losing its original meaning.

A Treatise on Diseases of the Skin. For the use of Advanced Students and Practitioners. By HENRY W. STELWAGON, M.D., PH. D., Clinical Professor of Dermatology, Jefferson Medical College and Woman's Medical College, Philadelphia; Dermatologist to the Howard and Philadelphia Hospitals. Handsome octavo of 1,125 pages, with 220 text-illustrations, and 26 full-page lithographic and half-tone plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$6.00 net; sheep or half morocco, \$7.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

We think that we are not very far astray in saying that general practitioners know far too little of diseases of the skin, their symp.

tomatology and treatment, but perhaps more especially of their diagnosis. At best, it is very often a fine point to correctly diagnose one form of skin affection from another, such requiring considerable care and knowledge of the many fine points involved in the different branches of dermatology. Dr. Stelwagon's book will undoubtedly be found to be a work that is complete and in every sense up to date and we are glad to find, in reading it, that the author has devoted most space to diagnosis. Another good point about the book is that Dr. Stelwagon, in discussing treatment, gives with emphasis what he in his own practice has found to be effectual and does not, as so many authors do, wander off into the often too shallow theories of others, of which he cannot speak with any degree of exactness.

W. A. Y.

Diseases of Children. By JAS. FREDERIC GOODHART, M.D., LL.D., Aberdeen, F.R.C.P., Consulting Physician to the Evelina Hospital for Sick Children; Consulting Physician to Guy's Hospital; late Demonstrator of Morbid Anatomy and Lecturer on Pathology in its Medical School. Seventh edition. With the assistance of George Frederic Still, M.A., M.D., F.R.C.P., Assistant Physician for Diseases of Children, King's College Hospital; Assistant Physician to the Hospital for Sick Children, St Ormond Street. Philadelphia: P. Blakiston's Son & Co. Canadian Agents: The Chandler & Massey Co., Limited, Toronto and Montreal.

It is now nearly eighteen years since the first edition of Dr. Goodhart's work on Diseases of Children appeared, and the fact that he has had to publish a seventh edition alone speaks volumes for the character of his contribution to medical literature. Dr. Goodhart modestly calls his book "A Student's Guide to Diseases of Children." It is more than that, and might easily be termed a text-book without resorting to any exaggeration.

The seventh edition brings the volume in every respect up to date, the author having re-written or re-arranged it in almost its entirety. The space devoted to the feeding of infants is considerable, and wisely so, as every physician realizes how important this is, and how, if it were correctly carried out, it would in a vast number of cases entirely ward off sickness.

The Medical Treatment of Gall-Stones. By J. H. KEAY, M.A., M.D. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. Canadian Agents: The Chandler & Massey Limited, Toronto and Montreal.

In this small work of 126 pages Dr. Keay has certainly put forward a very strong plea for the medical treatment of gall-

stones. He does not dispute the fact that surgery finds its place in the well selected cases, but argues that it is not the rational treatment in the great majority of cases, and that much more can be accomplished by the physician than the surgeon in this field. The grounds he takes is that the surgeon, by opening the gall-bladder or ducts, or both, and removing the stones, does little towards permanently relieving his patient; whereas, the physician who recognizes and treats, by diet, drugs, hygiene, etc., the causes of the formation, migration of the stones, with their consequent impaction and perforation of ducts, accomplishes much more.

The author quotes many cases, amongst others his own personal experience, having been a sufferer for years from gall-stones. The treatise is divided into the Formation and Migration of Gall-stones, the Morbid Conditions associated with them, their Symptoms, Diagnosis, and Treatment, and will prove to be four or five hours' useful and pleasant reading.

W. H. P.

A Text-Book of Practical Therapeutics, with Special Reference to the Application of Remedial Measures to Disease and Their Employment Upon a Rational Basis. By HOBART AMORY HARE, M.D., B.S.C, Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; One-time Clinical Professor of Diseases of Children in the University of Pennsylvania; Laureate of the Royal Academy of Medicine in Belgium, of the Medical Society of London; Corresponding Fellow of the Sociedad Espanola de Hygiene of Madrid; Author of a "Text-Book of Practical Diagnosis," etc. Ninth edition, enlarged, thoroughly revised and largely rewritten. Illustrated with 105 engravings and four colored plates. Philadelphia and New York: Lea Brothers & Co. 1902.

This, the ninth edition revised and enlarged, practically represents the scientific and practical therapeutics of to-day. The author, whose whole life has been devoted chiefly in this direction, has compiled a work which no physician or student can do without if he wishes the most ready and up-to-date therapeutical work in his library. Dr. Hare's clear-sightedness and exactness is characterized in his work, and has enabled him to give his confreres a volume that cannot but be fully appreciated by his many admirers.

A. J. H.

The Care of the Teeth. By SAMUEL A. HOPKINS, M.D., D.D.S. Professor of Theory and Practice of Dentistry in Tufts College Dental School. New York: D. Appleton & Company. 1902.

Appropriately dedicated to the mother is this little work on the care of the teeth. How much anxiety and trouble would be spared

to mothers if they were able to prevent and relieve the pain, discomfort, disfigurement, and ill health caused to their children by the defective condition of their teeth. Certainly the great field for relief in this direction consists in measures of prevention, and in the early treatment of dental caries. It is because the author is actuated by the belief that the decay of the teeth may in a great measure be prevented, that he has written this little book. It is full of suggestions of a practical nature, which will be of benefit to mothers of young children, to school teachers, nurses, physicians, and others who have the opportunity of influencing for good the lives of young children. It will also be found of interest and use to everyone desirous of taking proper esthetic, and hygienic care of the mouth and teeth.

E. H. A.

Saunders' Medical Hand-Atlases.—Atlas and Epitome of Abdominal Hernias. By PRIVATDOCENT DR. GEORGE SULTAN, of Gottingen. Edited with additions, by WILLIAM B. COLEY, M.D., Clinical Lecturer on Surgery, Columbia University (College of Physicians and Surgeons). With 119 illustrations, 33 of them in colors, and 277 pages of text. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$3.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

There are few situations in which a practitioner sometimes finds himself placed which demand such prompt action as when face to face with a strangulated hernia. Under such circumstances it is essential that there be no delay. The attendant doctor must recall what he may years ago have learned as to hernia and its treatment, but which knowledge he might not have had so far to make use of in practice—an atlas, such as this, can prove of incalculable benefit under those circumstances, as even a glance at the colored illustrations will prove of the greatest assistance. Dr. Sultan's Atlas is exceedingly practical and deals largely with the operative side of the subject. The illustrations are very well drawn and add materially to the value of the book.

W. A. Y.

Clinical Psychiatry. A Text-Book for Students and Physicians. Abstracted and adapted from the Sixth German Edition of Kraepelin's "Lehrbuch Der Psychiatrie." By A. ROSS DEFENDORF, M.D., Lecturer in Psychiatry in Yale University. New York: The Macmillan Company. London: Macmillan & Co., Ltd. 1902. Cloth, \$3.50.

The introductory section on general symptomatology, comprising one-sixth of the book is entertaining and instructive not only to the general practitioner but also to the experienced alienist. The author's examination of normal physiological mental manifestations

and his comparison of them with morbid psychical expressions as observed in mental disease attest at once his masterly grasp of his subject. In clear, concise and elegant diction he has most successfully accomplished in this handsome volume his object of presenting to American students and practitioners an adaptation of Professor Kraepelin's more elaborate work on psychiatry, and having done this he has added much to the interest of the study. It is however, a matter of doubt whether the same clear and definite views of the different forms of mental disease may be obtained from the classification adopted by the German Kraepelin as from that promulgated by the English Clouston.

N. H. B.

Heralds of Empire. Being the story of one Ramsay Stanhope, Lieutenant to Pierre Radasson, in the Northern fur trade. By A. C. LAUT, author of "Lords of the North." Toronto: William Briggs.

This romance is of interest in parts, but the authoress seems to have failed to grasp the exact physical geography of that wonderful country which surrounds the Hudson Bay. Her fault (I will not say failure) was the same in "Lords of the North." This same fact is the one source of beauty and attraction to Charles Kingsley's and Robert Louis Stephenson's works, and we cannot but suggest it to the authoress. Her style is very effective at times, and we must congratulate her on the masterly way she has handled his romance. Taking her characters in Boston, she transports them in ships to Hudson Bay territory, finally bringing them to the Court of King Charles. Miss Laut is a resident of Ottawa, and has succeeded in writing an attractive story, and we wish her efforts may be as much appreciated as they certainly deserve.

This book is published by William Briggs, Toronto, and is most tastefully bound in black cloth, with red and gold relief.

A. J. H.

Compend of Special Pathology. By ALFRED EDWARD THAYER, M.D., Assistant Instructor in Gross Pathology, Cornell Medical College; Pathologist to the City Hospital; formerly Fellow in Pathology Johns Hopkins University, etc. Containing 34 illustrations. Philadelphia: P. Blakistons Son & Co., 1012 Walnut Street. 1902. Canadian Agents: The Chandler Massey Limited, Toronto and Montreal.

This small work may be perhaps best described as a manual. It is divided into ten chapters, the subjects considered being: The Circulatory System, Respiratory System, Ductless Glands, Alimentary Canal, Alimentary Glands, Urinary System, Reproductive System, Locomotory System, Cutaneous System, and Death

by Violence and Poison. It will be found to be a most useful adjunct to the larger and more comprehensive works upon the subject, and convenient for hurried reference.

Diseases of the Nose, Pharynx and Ear. By HENRY GRADLE, M.D., Professor of Ophthalmology and Otology, Northwestern University Medical School, Chicago. 547 pages, illustrated. Philadelphia: W. B. Saunders. 1902. Cloth, \$3.50. Toronto: J. A. Carveth.

The author presents the diseases of the nose, pharynx and ear as he has seen them during twenty-five years' practice. Every practitioner has had anxiety about the course and outcome of disease in individual patients, anxiety due to lack of experience in such cases and because no sufficient answer to his questions was to be found in the text-books. Dr. Gradle has tried to meet just such questions. The relation of therapeutic procedures bears the stamp of personal experience. Enough, but not too much, space has been devoted to the topographical anatomy of the parts. Altogether, it is a useful text-book and a good work for reference. J. M. M.

First Report by the Canadian Red Cross Society on its Operations in the South African War, October 21st, 1899, to June 1st, 1902.

Thanks to Captain Charles A. Hodgetts, M.D., A.M.S., Toronto, we are in receipt of the first report of the Canadian Red Cross Society as to its operations in the South African War. The Report is exceedingly well gotten up, bound in a rich grey cover, bearing on the outside the Society's crest, a beautiful maple leaf with, in its centre, the red cross. The pamphlet is exceedingly interesting, especially the report of the Red Cross Commissioner, Lt.-Col. George S. Ryerson, of Toronto, and goes to show how much the work and labor of love on the part of the Society, in its different branches, is appreciated, and the comforts afforded to our brave boys when in a far-off land fighting for our dear old flag.

The Lady Paramount. By HENRY HARLAND, author of "The Cardinal's Snuff-Box." Toronto: William Briggs.

In this charmingly-told love tale, sunny Italy and old England divide honors as the scene of inaction. Day glides into night, and then again it becomes morning, and the song birds "thrid" (the author says) the blue heavens through and through with their melody, and so on till the book closes over the last chapter. Besides the loving maid and the lovely man, a sprightly, verdant, person keeps something doing in the talking line all the way

through; his sayings are as bright as "a new dollar," but less valuable to the long-suffering reader. Altogether, it's a good story for the silly season, and we prophecy for it a first place in the list of hammock books for 1902.

W. A. Y.

Some Important Practical Notes on the Technique of Skiagraphy.

By MIHRAN K. KASSABIAN, M.D., in charge of Roentgen Ray Laboratory, and Instructor in Electro-Therapeutics in the Medico-Chirurgical College and Hospital, Philadelphia, Pa., etc.

It will repay any physician, whether particularly interested in X-Ray work or not, to send a postal card to the G. Cramer Dry-Plate Co., St. Louis, Mo., and ask for a copy of this pamphlet. It is quite short, and can be read through in very little time, is full of practical information as to the cathode rays and their application to surgery, and written by a man who is able to express an opinion on the subject.

In Search of Mademoiselle. By GEORGE GIBBS. The Copp Clark Company Limited, Toronto.

This is much superior to many of the modern novels. The style is similar to that of "Lorna Doon," though less prosy in descriptive detail. The title page is kept strictly in evidence all the way through the work, while it abounds in stirring adventures from beginning to end. The brutal cruelty of Diego de Basco, the deceit and rapacity of Mendenez, the courtly honor and confidence of Ribault, and the terrible and complete revenge of De Gourgnues are all brought out in bold relief and in contrast with the modesty, honesty and strength of character of the giant hero, Killigrew. The volume contains 373 pages and four illustrations.

W. J. W.

The Life of St. Luke. By EDWARD CLAPTON, M.D., L.R.C.P., late Physician to St. Thomas' Hospital. London: J. & A. Churchill, 7 Gt. Marlborough Street. 1902.

This small book of eighty pages in length will prove of interest to many, more especially, perhaps, Biblical scholars. The life of Saint Luke is full of interest, and will be read by medical men if for no other reason than that the character throughout the volume represents the life of a physician as well as an evangelist.

The Baby's Care in Health and Disease. By EDWIN LEONARD, Jr., M.D. Jersey City, N.J.: Reed & Carnrick, Publishers.

This little pamphlet is replete with facts which cannot but be of value to nursing mothers and others who have the care of infants.

The different chapters discuss such subjects as: Our Baby, How to Feed the Baby, Symptoms of Disease, Common Diseases, Accidents and Emergencies, Local Remedies, Diet for the Older Ones, Diet for the Sick and Convalescent. Incidentally the value of Reed & Carnrick's different foods and preparations is demonstrated.

Baby's Diary. Published by Borden's Condensed Milk Co., New York, N.Y.

This pamphlet is quite unique. It is tasty in appearance, and will be prized by many mothers as useful to record their "darling's" progress in life, also weight at certain periods of the child's existence, date of christening, the date when dentition first appeared, its actions, food, health, etc., etc. The publishers will be glad to send one to any one for the asking.

Mrs. Wiggs of the Cabbage Patch. By ALICE CALDWELL HEGAN. Toronto: William Briggs. Cloth, 75 cents.

A great deal of humor, a touch of pathos, a character study of a cheery woman of the working-class in old Kentucky, a chapter here and there devoted to the "doings" of her several children, who add much to the amusement of the reader as he spends an hour in the company of the inimitable Mrs. Wiggs.

On Analgesic Methods and their Respective Limitations.—

Prof. J. V. Mikulicz, of Breslau, says: "Apart from the minor procedures, numerically important though they be in medical practice, the only local analgesic that we need consider nowadays is cocain and its surrogates, eucain, tropacocain and holocain. I refer the reader to the communications made by Gottstein in the years 1896 and 1899 in regard to the technique of local anesthesia as practised in my clinic. I shall only remark here that we employ the following solution for infiltration anesthesia:

Cocain hydrochlorate.....	0.5 gram.	(7½ grains)
Beta-eucain hydrochlorate	0.5 "	(7½ ")
Chloride of sodium.....	2.0 "	(30 ")
Distilled water	1000.0 "	(32½ ozs.)

We do not add the morphine, as originally recommended by Schleich, for, as is well known, it has no local effect at all, and sometimes shows a very undesirable general one. When it is deemed necessary to get an additional morphine effect, we give a subcutaneous injection of 0.01 gram. (1 6 grain) of the drug half an hour before. We have employed the methods of Oberst and Hackenbruch exactly as prescribed by the authors." (Abstracted from the *Archiv für klinische Chirurgie*, Vol. LXIV., Part 4, Berlin, 1901.)

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF
MEDICINE AND SURGERY

VOL. XII.

TORONTO, OCTOBER, 1902.

NO. 4.

Original Contributions.

THE SOCIAL PHASE OF SMALLPOX AND VACCINATION.

BY P. H. BRYCE, M.A., M.D.

PROF. SEDGWICK, of Harvard, in his recent work defines public hygiene as *the science and the art of the conservation and promotion of the public health*. Accepting this as a practical definition of the scope of public health, it is evident that we may very properly discuss the relation in which diseases, of which smallpox is the type, stand to the interests of society, whether as individuals in a social unit or community or as citizens of a nation which enacts laws for the government of its own people. Much argument may be had as to the extent to which individualism or *communism* in its exact sense should be the underlying principle in legislation; but practical common sense and general experience, as seen in every day business, in educational, municipal and religious affairs, teaches that what cannot be done so well by the individual alone, as by a number acting together for a common end, may properly come within the sphere of governmental and municipal action. The strength of this position may be pressed still further in any case where the action or inaction of one individual directly endangers the welfare or health of another. Such has been the subject of common action, even in those primitive communities, whether in past or present time, which have sacrificed a member of the tribe—even their choicest youth—to placate an offended deity, or who have put to death wendigoes or witches, supposed to exercise malign influences whether upon men or cattle. We may then properly conclude that in the instance of a contagious disease, and especially of small-

pox, which to the most uneducated, as the western Indians, whose traditions tell of whole tribes destroyed by epidemics of it, is looked upon as so loathsome and terrible that armed men have been known to guard the banks of a stream to prevent men from an infected settlement crossing, the most primitive societies recognize that common action may properly be taken to avert what is or may become a general danger or calamity.

The postulating of such a principle for the action of society must seem to most people wholly unnecessary and commonplace in view of the facts illustrated by a hundred years of history; and yet, we have only to read extracts from the daily press, from many particularist magazines, and indeed from many so-called scientific journals, to learn the truth of that proverb: "Where there is no vision, the people perish; but he that keepeth the law, happy is he;" and to find medical officers of even large Canadian cities assuming reactionary attitudes with regard to the duty of the individual and of the community in dealing with outbreaks of this disease—if the cases be mild—by means of vaccination and prompt and thorough quarantine.

However commonplace it does seem necessary to recall a few facts culled from the pages of history. Dr. Brooke (1766 A.D.) says, in his *General Practice of Physic*: "Smallpox has been for ages, and continues to be, the terror and destroyer of a great part of mankind. . . . In the ordinary course and duration of human life scarce one in a thousand escapes the smallpox." Before this, indeed, Ben Jonson had written an epigram to smallpox beginning with:

"Envious and foul disease, could there not be
One beauty in an age, and free from thee?"

while at the beginning of the nineteenth century we are informed that 90 per cent. of all the inmates of hospitals for the blind in England were there on account of smallpox. Dr. George Bell, of Edinburgh, wrote in 1802 that the smallpox in Europe for more than 1,000 years has descended with undiminished violence from generation to generation, and every effort made hitherto to extirpate it has failed. Of epidemics in America we have statistics of Boston from 1721-1792 in which it is stated there were seven epidemic years, during which the average population was 14,714 and the average number of cases 5,600, or 38 per cent.; while Simon says of it in the 16th century: "In Mexico it even surpassed the cruelties of conquest, suddenly smiting down 3,500,000 of population and leaving none to bury them."

Such was the monotony of history and statistics at a time when Jenner made his memorable discovery, imitating, except in the source of his virus, the practice introduced into England from Constantinople by Lady Mary Wortley Montagu of inocu-

lation from a case of existing smallpox, and who wrote from Adrianople regarding the practice as early as 1717 A.D.

Of the effects of vaccination during an epidemic those in Montreal in 1885 may be given, wherein 30.8 per cent. of cases died in the unvaccinated and only 4.1 in the vaccinated. The results during the recent epidemic in London, England, have told



No. 1.

March, 1901.

Photo supplied by Dr. C. A. Hodgetts.

Shantyman in Tent Hospital, Sudbury. Illustrating the vesicular stage of eruption.

the same story. Thus, in the statistics for the week ending December 30th, 1901, we find that of 97 unvaccinated there were 60 per cent. of deaths, while of cases up to ten years in vaccinated persons not one death occurred, and only two between ages of ten and twenty.

Such are only a few illustrations selected from an unlimited

mass of materials showing what smallpox as an epidemic disease was, and would be to-day were its prevalence as great and our defences against it as limited as they were before 1796. One of the most pertinent questions which we may ask ourselves, however, is: "Granted all these facts, is it not true that in the Province of Quebec fatal epidemics of smallpox have not appeared since 1885, and that in Ontario the total deaths since 1882 have not much exceeded 200; and yet systematic vaccination has not been carried out by the people or the municipalities during the past fifteen years?"

The question has been posited thus clearly so that those doctrinaires who, in the matter of smallpox, would preach the expediency of a policy of *laissez faire* and of allowing outbreaks of the disease to be dealt with simply as ordinary diseases are by practising physicians, leaving the matter of quarantine and vaccination to the individual intelligence and sense of duty to the public, must accept the position either that such a course of action within their own experience or from the accredited evidence of history has suppressed outbreaks, has prevented an increase of the death-rate, has not produced destructive effects upon health as disfigurement of features or loss of eyesight, has not been disturbing to the public comfort and sense of security and has not been injurious to their own or the general commercial prosperity of any community. Are such prepared to accept and occupy such a position? But while they may not do this they may fall back upon another and say: "No, we are not prepared to go so far, since we admit that common municipal and governmental action has at times been necessary to suppress severe and fatal epidemics; but, nevertheless, there are diseases, and at present smallpox in America is such an one, which are so mild in their effects, so little fatal, and yet so difficult to control without great inconvenience and expense to the public that it were better to simply leave their management to the individual citizen and his physician. For the moment let us accept the position. It has been estimated that during a single year, 1900, there were in the United States at least 100,000 cases of smallpox; while in Ontario alone during a single year there were some 2,500 cases. The deaths in all were not greater than one per cent. in Ontario, and probably no more than this in the United States.

Taking that in Ontario as a type of the outbreaks it may be stated that not much less, probably, than \$500,000 has been spent by the municipalities and government in preventing the spread of the disease. With regard to the number of persons liable to the disease, owing to their not being protected by vaccination,—assuming, of course, for the moment, that successful vaccination in infancy is a protection up to ten years and very largely so up twenty years—we may roughly estimate that of the population



No. 2.

January, 1902.

Cases in Harwich Township.



No. 3.

Photo supplied through kindness of Dr. W. H. Tye, Chatham.
 Father and son infected from same previous case in family. Both were unvaccinated, and
 boy had been diagnosed first as chickenpox.

of Ontario, 2,182,947, the greater part of some 913,645 have been born since the fatal epidemic of 1885 in Montreal, during which vaccination was very general in Ontario. Since that year there have been a number of isolated outbreaks of smallpox in Ontario promptly stamped out; but not until 1901 did the disease become general, that is, having numerous centres, and as a result no general vaccination had been practised for upwards of fifteen years until the present epidemic. Assuming a relatively large number of persons in Ontario to be revaccinated in the 1,200,000 over twenty years of age, and it is apparent that the situation as regards the number in both age classes liable to the disease is very large and that the mortality rates which prevailed in London during the epidemic of last autumn and winter, or of the outbreak at present existing in New York, would have prevailed in Ontario had that type of disease been introduced, and had there been as many cases during 1901 and 1902 as there have been. There were in all some 3,500 cases in fifteen months, which, with an average mortality of 25 per cent., would have meant nearly 900 deaths. It has been already stated that at least \$500,000 is estimated to have been spent by provincial and municipal authorities in stamping out the epidemic, and that most active and drastic measures both of isolation and vaccination were adopted. What the extent of the outbreak would have been had such measures not been taken cannot, of course, be definitely stated, but several instances will serve to give us some idea. Owing to the disease in 1901 not having been early diagnosed and few measures of isolation and almost none of vaccination having been adopted, 550 cases occurred in settlements and camps in an area of 150 miles along the C.P.R. in a population not exceeding 25,000, between Sault Ste. Marie and Sudbury, within three months. In October, 1901, a case unfortunately diagnosed as chicken-pox, occurred in Dover Township, in Kent. For two months the disease had spread unchecked by any official action. Such, subsequently, for a time was not thorough. The total cases were nearly 400, not to mention many in neighboring townships arising from the Dover outbreak. In Osprey Township, in Simcoe County, in a most prosperous community, a mistaken diagnosis of the same kind in April, 1902, enabled the disease to get a start and resulted even with the most drastic methods subsequently in 76 cases. In Burford Township, an old-settled and intelligent community, some 200 cases occurred in 1901 because the disease had been first called chicken-pox, and the local physicians had taken no steps to isolate cases or prevent the convalescents from attending schools and churches. The disease was only stamped out with difficulty after thorough measures were adopted. Dozens of such examples, less notable simply because active measures for suppressing the disease were taken early, might be given; while the 10,000 cases in the six months of 1885 in

Montreal, most of which had occurred* before active municipal measures for its suppression were adopted, illustrate the fact that, were a contagious disease present the average good sense of any community does not serve to prevent its spread, unless when crystallized into organized and systematic methods.

It has been, we think, fully demonstrated to what an extent the present epidemic of smallpox of a benign character, beginning in 1899 would have prevailed in Ontario had the views of the *laissez faire* school and of anti-vaccinationists been accepted; and when they turn to statistics and point to the low mortality after all our trouble, we ask them are they prepared with us to adopt drastic measures of every necessary kind when the disease with a high death-rate does really make its appearance? If they do—and this is the position of many believers in vaccination, both amongst physicians and municipal officers—they will have to explain by what conceivable means they are going to discover when an epidemic, like that from Japan in 1900, which killed nearly 50 per cent. of its victims, is going to appear, though even its first case in Port Arthur was so mild that it was not diagnosed, or at what moment virulent smallpox may arrive in Toronto from some hidden source in the slums of New York or Boston.* Perhaps it is natural that we, viewing these matters from the official standpoint, should seem to disregard personal inconveniences and even municipal expenditures; but it would seem that there can be no *via media*, no position which, as with some other diseases, can be adopted without the assumption of a responsibility as regards loss of life, family misfortune and commercial disaster, which none who recognize what an epidemic of smallpox means would care to assume. Probably by none must the mental perspective be more accurately maintained than by the physician; and this can only be obtained by the frequent readjustment of the instrument to a proper focus from time to time. Our memories are proverbially short and mental pictures grow dim with surprising rapidity, but we do well to remember that Nature is ever the same in her methods and her results, and if she seems at times to present herself in tranquil mood, as where the whole woodland is perfectly mirrored in the placid bosom of some northern lake, yet the time will speedily come when her rugged work must be done. He is, indeed, the wise mariner who looks well to staysails and masts, to keep his vessel afloat and return unscathed to the desired haven.

*In May, 1900, an outbreak of smallpox occurred infecting many persons at different points between Winnipeg and Montreal, caused from exposure to a passenger from Australia via Japan to Vancouver, thence by C. P. R. The gentleman sickened on the train west of Winnipeg, was taken to the Winnipeg Hospital and died, as at first thought from purpura hemorrhagica. It proved to have been smallpox, and caused twenty-two cases and deaths in Winnipeg. Persons exposed on the train carried the disease to Eastern points. The first case at Port Arthur was mild and was not diagnosed, and resulted in the infection at that point and Fort William of fourteen persons and six deaths, at Arnprior of one person and one death, in Carleton Place of six persons and two deaths, in Montreal of six persons and two deaths, at Seine River of one case, at Saul Ste. Marie of one case and one death and at Wolfe Station of one person and one death.

SMALLPOX—A BRIEF CLINICAL DESCRIPTION OF 1,500 CASES.

BY CHAS. A. HODGETTS, M.D., L.R.C.P. LOND. (ENG.), TORONTO.

Medical Inspector Provincial Board of Health.

The following clinical description is based on the observation of nearly fifteen hundred cases of the disease occurring in different portions of the province during the past three years. It is given to incite to a more careful study of what has been and still is the *bête noir* of many a medical man, and that the student of medicine may take an interest in what has hitherto been passed lightly by, perhaps altogether unheeded until communities have been confronted with the disease in its severer forms and then epidemic in character, all of which could have been avoided if any intelligence had been shown in the handling of the initial cases.

The more the disease is studied, the more the observer becomes impressed with the fact of the following contentions that the epidemic of the past few years is something of the nature of a hybrid, whatever that may mean, or a disease required to be christened as one not hitherto referred to by medical writers. But on the contrary there is present even in the mildest case the specific infection of smallpox which sooner or later in its progress from individual to individual manifests virulence enough to satisfy the greatest skeptic of its true character. Further, the writer cannot agree with those who classify the mild cases under the head of "varioid," which term should be retained for cases, modified by vaccination only.

Without going into details, it may be briefly stated in introduction that the disease in this province had its origin from the neighboring States. It has been more prevalent during the fall and winter months, and old and young alike have suffered; its ravages have been almost entirely amongst the unvaccinated; its contagiousness is chiefly of a direct character, and very mild, being more marked during the periods of pustulation and scabbing. The period of incubation is rarely less than twelve days, but often extends to seventeen or eighteen days. The mild character of the first case in a family or community is no criterion of the severity of the next or subsequent cases, and there are noticed sudden exacerbations in the severity of the type, with succeeding remission in those attacked later—a case of so-called "Cuban itch," or chicken-pox, followed by one of confluent or hemorrhagic smallpox?

Initial Symptoms.—The onset is more or less sudden, though often not severe, and lasts the greater portion of three days, it is



No. 4.

February, 1902

Children in same family from same exposure, both unvaccinated.



No. 5.

Photo through kindness of Dr. J. R. Boyle, B.A., Casselman, illustrating extreme variations in type of disease.

seldom prolonged to five days, but occasionally a patient will suffer from a feeling of *malaise* shortly after exposure. The most common symptom is that of headache, frontal, occipital or general, and of marked constancy, though not severe in character; indeed, moderate would convey a correct idea of the severity of the pains and aches usually complained of. Backache has not been so typical or frequent in the lumbar as in the sacral region, the pains extending from the latter locality to the thighs and legs. Vomiting even in children has not been marked; generally speaking, the stomach symptoms are mild in character, the tongue is but slightly coated and there is but little disturbance of the digestive apparatus, a large number complain of sore throat. The temperature ranges from 100 to 103 degrees F., pulse slightly accelerated, and respiratory system only occasionally presenting any symptoms. In children often there will be noticed drowsiness and slight restlessness and nausea, with a case now and again of convulsions.

Initial rashes have been but little observed, probably owing to the general mild character of the disease; where seen they have been mistaken for scarlatina or measles. They have been more marked on the lower portion of the abdomen and inner portion of the thighs, but may extend over the whole body.

The Eruption.—In the majority of cases the eruption appears on the third day and often in one crop, yet cases occur where it has not made its appearance until the fourth or fifth day. The maculæ are noticed first on the face, wrist or arms, these become papules often in the course of a few hours and synchronous with their appearance on the skin, they will be noticed on the mucous membrane of the hard and soft palate, and even in mild cases, on the conjunctiva.

Irregularity in the distribution of the rash and variation in amount, are particularly noticeable, from a single typical vesicle appearing possibly on the face, wrist or body; or a scattered dozen over the body generally, to a patient with scores, hundreds and thousands. The face, wrists, hands and body are the most frequent sites of the eruption, but cases are found where it is confined entirely to the face and neck, not extending below the line of the clavicle, or a few may be noticed only on the face and back, or extremities, or clusters in widely different locations will be noticed, which do not become confluent. Another interesting feature is the difference in the size of the vesicles, ranging from the size of a pin head to a little larger than a split pea.

In every case of smallpox, however mild, the eruption begins, as previously stated, as a minute red maculæ, faint in color, which, increasing in size, becomes a papule within a few hours, some of the maculæ, however, do not follow this course, but fade away and there follows a slight branny desquamation. The papulæ



No. 6.

February, 1902.

Illustrating in No. 6 inflammatory condition of subcutaneous tissues, and in No. 7 a discrete case in which pustules of face have collapsed and are crusting, while pustules are still on hands.



No. 7.

Through kindness of Dr. J. R. Boyle, B.A., Casselman

becomes gradually larger, widening at periphery, and distended with serum, the limit of growth being attained in from three to five days. The uniform outline of a papule is circular, raised above the level of the skin and pearly in appearance. Very frequently the vesicles will be only partially filled with serum and consequently do not present the rounded border nor yet the umbilication.

During the days in which the vesicles are filling some of them dry up and drop off in the form of scales or thin crusts, particularly is this the case with those on the face, neck and back of the hands. Vesicles which reach their maturity show an areola of inflammation around their margins from their earliest appearance, it is more marked at the inner margin and fades off to the periphery. They are slightly raised in mild cases but more marked in the severe ones.

The usual period for the appearance of the successive stages from macule to pustule is generally twelve days, after which time the pustules rupture and form yellow scabs, yet it will be noticed that in many cases the transition period is hastened in the case of individual vesicles and thus there may be noticeable on the same patient the following interesting condition: (a) A clearing off of the face and backs of the hands about the eighth day, while on other portions of the body and limbs will be seen (b) yellow crusts which are shrivelled up, abortive pustules, mingled with (c) flattened reddish-brown scabs, the result of inspissation of unruptured pustules, particularly on the soles of the feet and palms of the hands; also pustules quite typical in character and pursuing a regular course, and later on rupturing in the centre, the pus escaping, drying and forming yellow crusts. After the falling of the scabs there is frequently following a branny desquamation. The base will present a flattened red new epidermis, of either a depression or elevation, which in fading may become brownish.

Constitutional and other Symptoms.—The premonitory symptoms abate altogether with the appearance of the eruption, though in some instances their disappearance is gradual. The temperature ranges from 99.5 to 103.5 degrees F., and its fall is coincident with the onset of the eruption. Secondary fever is rarely noticed in mild cases, the fever being proportionate to the number of pustules present and their size; where present, it reaches to 104 degrees F. with morning remissions and evening rises, reaching a maximum from the ninth to the twelfth day of the disease. The pulse is usually accelerated during the onset but becomes normal on the subsidence of the primary fever and is but little changed, except secondary fever occurs. The tongue is but slightly coated, bowels usually constipated, the action of the kidneys is slightly increased. Soreness of the throat is frequently

complained of, beginning with the onset of the eruption and continuing for a few days. In the majority of cases after the appearance of the rash the patient claims "never to have felt better in his life."

Modified Smallpox.—Varioloid.—Unfortunately, for clinical purposes, but a small percentage of cases in the present epidemic has been of this class, but in the instances which I have noticed the disease is materially modified after the initial stage, although no vaccination had been performed within ten years. There will always be found satisfactory evidence of successful vaccination, near or remote, and as a rule the more remote the less modified, although cases will be observed where vaccination had been successfully performed years ago (in one instance forty-five years) and where but one abortive pustule developed.

The premonitory symptoms seem to be as severe and characteristic as in the unvaccinated, and indeed in many cases the disease ends here—variola sine eruptione—a form which I have never noticed in the unvaccinated.

The rash appears within the first twenty-four hours from the appearance of the first papule and is not abundant; the maculæ are often so faint that this stage passes unnoticed, the papulæ being the first portion of the rash observed. Some of the papules abort and scale off. The vesicles attain their full growth in two or three days and are smaller than in variola and less uniformly circular. Umbilication is not so constant, the areola of redness being less distinct in the typical ones. The changes in the vesicle itself are more rapid than in variola and often the full stage of pustulation is not reached, and instead the vesicle appears opaque or cloudy, the contents becoming inspissated, forming a flat reddish brown deposit under the epidermis. The pustules arrive at their full stage of development within the first week of the appearance of the eruption and shortly after desiccate and fall off, leaving a reddened epidermis. The whole course of the eruption in the vaccinated may be described by the one word "abort" as compared to variola.

There is so little to chronicle of the sequelæ of this mild type of variola that any detailed reference to the progress of the disease would be of little import to the subject, the chief interest centering in the appearance of the eruption and its erratic course as compared with smallpox as generally described.

Selected Articles.

EDWARD JENNER: HIS LIFE, HIS WORK, AND HIS WRITINGS.*

EARLY HISTORY.

EDWARD JENNER, the son of the Rev. Stephen Jenner, rector of Rockhampton and vicar of Berkeley, was born at the latter place, May 17th, 1749. His mother was daughter of the Rev. H. Head, a former vicar of Berkeley. His first school was at Wotton-under-Edge, where he was under the care of the Rev. Mr. Clissold; from there he was removed to the Rev. Dr. Washbourn, at Cirencester. Jenner's school career was of short duration. At about the age of thirteen he began his professional education under Mr. Daniel Ludlow, of Sodbury; from there he entered as a student at St. George's Hospital, where his name appears in the list of students for 1770, and when he was twenty-one he went as house pupil to John Hunter. Jenner had an innate love of natural history, and nothing could have been more fortunate than his falling under influence such as Hunter's. The young pupil came with a fair knowledge of both zoology and geology; the fossiliferous rocks of his native county had given him ample opportunity for studying geology, and the collecting of fossils was a hobby which he retained throughout his life. To a young man with these tastes Hunter's house with its menagerie and collection of specimens must have been a paradise.

HIS CORRESPONDENCE WITH JOHN HUNTER.

Between master and pupil an affection sprang up which was only terminated by Hunter's death. Unfortunately the letters from Jenner to Hunter have disappeared, but those of Hunter show that Jenner's opportunities in the country of getting specimens and carrying out experiments were always taken advantage of by Hunter and lovingly responded to by his pupil. These attentions of Jenner to Hunter were reciprocated by the latter making purchases for Jenner in town. "I have sent you the candlesticks as you desired," writes Hunter: "I hope you will like them. They cost five pounds and a shilling, so I owe you four shillings." Again, when Hewson's preparations were for sale, Hunter writes and offers to purchase any that Jenner may

*Reprinted from the Jenner Centenary Number of the *British Medical Journal*, May 23rd, 1896.

require. A subsequent letter shows that prices were too high for him to make any bargains. Hunter writes: "I could not buy a single preparation for you, they all went so dear—injections of the lymphatics of a turtle sold for guineas, an eye not injected fifteen shillings, and so of all the rest." In 1786 we read in one of Hunter's letters: "I have brought the print of Wright, viz., The Smiths, which is his best. There is one more I would have you have—I mean Sir Jos. Reynolds' of Count Hugolino (*sic*); it is most admirable, and fit only for a man of taste."

Jenner frequently asked Hunter's advice in professional matters, and also sent patients up to London to him. Hunter's replies to Jenner's queries were generally mixed up with requests for specimens or for experiments. In 1776 he writes: "I have but one order to send you, which is send everything you can get, either animal, vegetable, or mineral, and the compound of the two, viz., either animal or vegetable mineralized. I would have you do nothing with the Boy but dress him superficially; these Fungus's will die, and be damnd to them, and drop off. Have you large trees of different kinds that you can make free with?" Hunter offered him a share in the school of natural history which he purposed starting. Jenner refused this offer.

His love for natural history nearly robbed medical science of Jenner's discovery. He arranged and prepared the specimens brought home by Captain Cook in 1771, and was offered the post of naturalist to the next expedition, which sailed in the following year. This, however, he declined, and settled down into country practice at his native town of Berkeley. Here for some years he led the quiet life of a country doctor, with ample leisure for his natural history pursuits. Baron, in his *Life*, gives us a picture of Jenner from the pen of his great friend, Edward Gardner, of Frampton:

"His height was rather under the middle size, his person was robust but active and well formed. In his dress he was peculiarly neat and everything about him showed the man intent and serious, and well prepared to meet the duties of his calling.

"When I first saw him it was on Frampton Green. I was somewhat his junior in years, and had heard so much of Mr. Jenner, of Berkeley, that I had no small curiosity to see him. He was dressed in a blue coat, and yellow buttons, buckskins, well-polished jockey boots with handsome silver spurs, and he carried a smart whip with a silver handle. His hair, after the fashion of the times, was done up in a club, and he wore a broad-brimmed hat."

Baron's description of his first interview with Jenner is as follows:

"The simple dignity of his aspect, the kind and familiar tone of his language, and the perfect sincerity and good faith mani-

fested in all he said and did could not fail to win the heart of any one not insensible to such qualities. . . . He was dressed in a blue coat, white waistcoat, nankeen breeches, and white stockings. We are grateful to him who told us that Milton wore large buckles and that Washington broke in his own horses, and in some future day the curious reader may be thankful for such particulars descriptive of the habits of Jenner."

It is from such contemporary descriptions only that pictures of the great men of the past can be completed; for this reason it is worth quoting a paragraph from the obituary notice of Jenner in the *Gentlemen's Magazine*, xciii, 104, evidently written by some one acquainted with him:

"In his housekeeping nothing was gaudy but all was good. The cookery was tastefully and fashionably set out, the wines commonly five or six kinds, old and of fine flavor. At a striking innocent trait of character the philosopher, as a keen observer, would smile cheerfully, but the writer of this never saw him indulge in what is called a horse laugh."

In 1778 Jenner was crossed in love; this he took very much to heart, and probably his correspondence with Hunter did not improve matters. Although not such a misogynist as his brother William, yet John had not very tender feelings towards the fair sex. He had evidently heard a false report as regards Jenner, for, with his usual disregard of grammar and spelling, he writes: "I was told the other day that you was married, and to a young lady with a considerable fortune. I hope it is true, for I do not know anybody more deserving of one." On hearing the truth, Hunter writes again: "I own I was at a loss to account for your silence, and I am sorry at the cause. I can easily conceive how you must feel, for you have two passions to cope with, namely, that of being disappointed in love, and that of being defeated; but both will wear out, perhaps the first soonest. I own I was glad when I heard you was married to a woman of fortune; but 'let her go, never mind her,' I shall imploy you with Hedge Hogs, for I do not know how far I may trust mine." There seems a continuous line of thought here, Jenner's future mistrust of the fair sex and Hunter's present mistrust of his hedgehogs.

FAMILY LIFE AT BERKELEY.

In 1788 Jenner was married to Miss Catharine Kingscote; although Mrs. Jenner was in delicate health she was able to do much for the poor and suffering in her neighborhood. In this she was efficiently helped by her husband. Jenner took an active part in all local work; he was a Justice of the Peace for the County of Gloucester, and performed the duties attaching to this office with great assiduity; in fact, Jenner's brother justices seem to have left a large part of the work to him; he also filled

the office of mayor of Berkeley. In Rudder's *History of Gloucestershire* it is stated that Berkeley "is called a borough, though it sends no members to Parliament, and has a mayor annually chosen at the courtleet, who has the tolls of the town and wheelage of all goods landed from the vessels in the river at 2d. a load; but the authority and privilege of his office seem to extend no further."

Jenner vaccinated all the poor in his neighborhood gratuitously; for this purpose he had a special place erected in his garden, which he called the Temple of Vaccinia. From one parish, however, he had for a long time but very few patients; all at once, from this same parish, people came in great numbers. On his making inquiry as to this sudden wish for vaccination, he was told that the churchwardens had been urging the people to be vaccinated on account of the great cost to the parish of the increased number of coffins due to death from smallpox!

There were three children born to Jenner—Edward, Catherine, and Robert. John Hunter stood godfather to the eldest boy. The following is his reply to Jenner's request that he would undertake this office:

January, 1789.

DEAR JENNER,—I wish you joy; it never rains but it pours. Rather than the brat should not be a Christian I will stand godfather, for I should be unhappy if the poor little thing should go to the devil because I would not stand godfather. I hope Mrs. Jenner is well, and that you begin to look grave now that you are a father.—Yours sincerely, JOHN HUNTER.

Edward was very delicate, and for his tuition at home Jenner engaged the services of a remarkable youth, John Dawes Worgan; he was a lad of great promise, and was preparing to go to Oxford with the view of being ordained. This he was unable to do on account of weak health, and he died in 1809 at the age of 19. A volume of his poems was published in 1810, with a preface by William Hayley. The book was dedicated to Jenner, and in the preface he is thus referred to: "To you, who animated the exertions of Worgan's life by your approbation, and who watched over the couch of his affliction with skill and sympathy of an affectionate physician, these his remains must be particularly interesting." Though Worgan died so young he wrote some essays in the *Gentleman's Magazine* in defence of vaccination over the signature "Cosmopolitus."

RETIREMENT FROM GENERAL PRACTICE.

In 1792 Jenner obtained the degree of M.D. from St. Andrews, and gave up general practice. This degree was obtained Gloucester, upon recommendation from J. H. Hiekes, M.D., of and Dr. Parry, of Bath. The entry in the minute book of the *Senatus Academicus* is dated July 8th, 1792; Jenner's name is

wrongly written in the minute book, as the entry reads: "The University agree to confer the Degree of Doctor in Medicine on Mr. Edward Jennings, Surgeon of Berkeley, in the county of Gloucester, upon recommendation from J. H. Hickes, M.D., of Gloster, and C. H. Parry, M.D., of Bath." In the Roll of Graduates the name was originally entered as Jennings, but has been subsequently altered to Jenner.

ACCIDENTS AND ILLNESSES.

Three times Jenner had a very narrow escape of losing his life. The first was during the severe frost of 1786. He had to ride from Berkeley to Kingscote on an intensely cold day in a blinding snowstorm. The experience is worth recording in Jenner's own words: "As the sense of external cold increased, the heat about the stomach seemed to increase. I had the same sensation as if I had drank a considerable quantity of wine or brandy; and my spirits rose in proportion to this sensation. I felt, as it were, like one intoxicated, and could not forbear singing, etc. My hands at last grew extremely painful, and this distressed my spirits in some degree. When I came to the house I was unable to dismount without assistance. I was almost senseless, but I had just recollection and power enough left to prevent the servants from bringing me to a fire. I was carried to the stable first, and from thence was gradually introduced to a warmer atmosphere. I could bear no greater heat than that of the stable for some time. Rubbing my hands in snow took off the pain very quickly. The parts which had been most benumbed felt for some time afterwards as if they had been slightly burnt. My horse lost part of the cuticle and hair at the upper part of the neck, and also from his ears. I had not the least inclination to take wine or any kind of refreshment. One man perished a few miles from Kingscote at the same time and from the same cause."

In 1794 he had a severe attack of typhus, contracted whilst attending his nephew Henry's wife, and again in 1811 he was stricken down with the same disease.

Jenner's home life at Berkeley for many years was one of great happiness. This was afterwards much clouded by the illness of his son, Edward, which terminated fatally in 1810. Mrs. Jenner, too, was very delicate; the state of her health caused Jenner great anxiety for some considerable time before her death, which took place at Cheltenham, September 13th, 1815. Jenner had taken up his abode at the last-named place about five years previous to his wife's death. Immediately after this sad event he again went back to Berkeley, and, except for a day or two, never left his native place again. The marriage of his daughter Catherine in 1822 left Jenner still more desolate. This

lady died August 5th, 1833, having given birth to a daughter four days previously. His other son, Captain Robert Fitzharding Jenner, also survived his father.

In 1820 Jenner had a fainting fit in his garden. He was picked up insensible and carried to his house. Baron was at once summoned, and on his arrival found that his patient had rallied, and that there was no reason for apprehending immediate danger. From this attack he never thoroughly recovered. The state of his feelings is best described in his own words, which are quoted from a letter written to Baron, May 31st, 1821. The original is in the Library of the Royal College of Surgeons. "My nerves still vibrate too readily when touched by unnatural sounds. Nature built the brain and nerves, but glasses, plates, knives, forks, and spoons, are not of her manufactory. The sharp sounds elicited by the sudden contact of these bodies when forcibly brought together produce an effect like the splash from a stone, forcibly thrown into a pool of smooth water. The propensity to feel this and the violence of the shock is in proportion to the length of the interval between one shock and another. Hollow sounds, such as church bells at a due distance, I do not regard, nor the rumbling of a waggon, however near, nor thunder. The clatter of a dinner table is the worst of all, from the clickings of knives, forks, and spoons on earthen plates; and it is more annoying when there are only two or three at table than when there is a party—perhaps from my attention being more abstracted from myself."

DEATH AND BURIAL.

On January 24th, 1823, Jenner saw a patient whom he describes as being in "a state of paralytic debility." On the following day he himself was found insensible on a couch, in a like condition to the last patient he ever visited. Again his old friend Baron was sent for, but this time without avail, and Jenner breathed his last on the following day. On February 3rd he was laid to rest in the chancel of Berkeley Church, by the side of his beloved wife.

The vicarage at Berkeley, where Jenner was born, is no longer in existence. The illustration of his birthplace is taken from a painting in the possession of Mr. F. Mockler. The room in which he died is that with glass door and Venetian shutters next to the conservatory in the picture of the present vicarage, which was partly erected on the site of "The Chantry." The "Temple of Vaccinia" is still standing. The hide of the cow from which Jenner took the matter to inoculate Sarah Nelmes is now in the curator's room at St. George's Hospital; an inscription states that it was presented to the hospital on October 14th, 1857, by Jenner's son.

DISCOVERY OF VACCINATION.

The year 1796 is a memorable one in Jenner's history, as on May 14th in that year he performed his first inoculation with cow-pox. The subject was a boy, about eight years old, named James Phipps, and the matter was taken from the hand of Sarah Nelmes, a dairymaid who had become infected by her master's cows. This was an anxious time for Jenner. On July 1st variolous matter taken directly from a pustule was inserted, but no disease followed. At once he writes off to his friend Gardner to tell him of his success. After describing the inoculation he proceeds:

"Having never seen the disease but in its casual way before—that is, when communicated from the cow to the hand of the milker—I was astonished at the close resemblance of the pustules in some of their stages to the variolous pustules. But now listen to the most delightful part of my story: The boy has since been inoculated for the smallpox, which, as I ventured to predict, produced no effect. I shall now pursue my experiments with redoubled ardour."

This subject seems to have first attracted Jenner's attention when he was a pupil at Sodbury. A young girl came there for advice, and on smallpox being mentioned she exclaimed: "I cannot take that disease for I have had cow-pox." During Jenner's pupilage he mentioned this matter to Hunter, who does not seem to have been much struck with the idea, but he gave to his pupil one good bit of advice, "Do not think, but try; be patient, be accurate." On his return to Berkeley the idea was ever constant in his mind. He found that the opinion of the young girl at Sodbury was a general one amongst the milkers in and around Berkeley. To get at the truth of this opinion was his great object, but it was not until 1780 that he felt sufficient confidence in his conclusions to warrant his imparting them to others. It was to Gardner that he first made known his ideas on the subject of propagating the protective cow-pox from one individual to another, and so ultimately staying the plague of smallpox. "Gardner," said Jenner, "I have entrusted a most important matter to you, which I firmly believe will prove of essential benefit to the human race. I know you, and should not wish what I have stated to be brought into conversation, for should anything untoward turn up in my experiments I should be made, particularly by my medical brethren, the subject of ridicule, for I am the mark they all shoot at." In 1788 he brought the question under the notice of the profession in London, but he does not seem to have made much impression on anyone but Henry Cline. The period between this and 1796 was spent in experimental inquiries, and on May 14th in that year, as before stated,

he carried out his first inoculation with the cow-pox. Then for two years there was no material for further experiments, as cow-pox disappeared from the dairies in his neighborhood. The publication of the *Inquiry* in 1798 is referred to in the article on Jenner's works.

Just before the issue of the *Inquiry* Jenner went again to London, where he stayed for nearly three months; but to his great mortification, he was unable to find the person on whom he could show the benefit of vaccine inoculation. Cline, however, in August of the same year inoculated a child, and he writes to Jenner: "The cow-pox experiment has succeeded admirably. The child sickened on the seventh day; and the fever, which was moderate, subsided on the eleventh. . . . I have since inoculated him with smallpox matter in three places, which were slightly inflamed on the third day, and then subsided." Cline, satisfied with the truth of Jenner's discovery, tried to persuade him to leave Berkeley and settle down in London, and assured him of a large and lucrative practice if he would do so. Jenner was proof against this tempting offer, and decided to remain in the country. Later he did give in to the advice of his friends, and took No. 14, Hertford Street, Mayfair, on a lease for ten years; he found, however, that the expenses of a London house were not compensated for by the practice he obtained, and so gave it up before the expiration of his lease and returned to Berkeley, going up to London occasionally as business required his presence there.

The spread of vaccination at home and in foreign countries is dealt with in another article. Here it may be noticed that though honors fell quickly upon him at home his reputation was still greater abroad. On more than one occasion he was the means of obtaining the release of Englishmen detained in captivity abroad. With Napoleon he was a great favorite; on one occasion Jenner petitioned him to allow two friends to return to England; Napoleon was about to refuse the petition when Josephine reminded him that it was from Jenner. "Ah," said the Emperor, "Jenner, we can refuse nothing to that man." So great was his influence that a document signed by him was a good passport; Baron has preserved one of these for us. It runs as follows: "I hereby certify that Mr. A., the young gentleman who is the bearer of this, and who is about to sail from the port of Bristol on board the *Adventure*, Captain Vesey, for the island of Madeira, has no other object in view than the recovery of his health.—EDWARD JENNER, Member of the N.I. of France, etc., Berkeley, Gloucestershire, July 1st, 1810."

The principal honors awarded to Jenner at home and abroad will be found in a tabulated form at the end of this paper.

ATTACKS ON THE DISCOVERY AND THE DISCOVERER.

It was hardly to be expected that so great an advance in protective medicine could be made without opposition. Misstatement and misrepresentation Jenner had to put up with and combat. The caricaturists of the period were not slow to take the matter up; in many of these persons are drawn with horns and cows' heads growing from their heads as the result of vaccination. Nor was such grotesque falsehood limited to the caricaturists. Dr. Rowley published a tract called "Cow-pox inoculation no Security against Smallpox Infection;" in this he figured an ox-faced boy, the fact being gravely stated that this appearance was due to the young man having been vaccinated. Dr. Benjamin Moseley, too, was a most determined opponent of vaccination, and lost no opportunity of attacking it. Cases were published where smallpox had undoubtedly followed vaccination. These Jenner had anticipated. "I expect," he said, "that cases of this sort will flow in upon me in no inconsiderable numbers, and for this plain reason—a great number, perhaps the majority, of those who inoculate are not sufficiently acquainted with the nature of the disease to enable them to discriminate with due accuracy between the perfect and imperfect pustule. This is a lesson not very difficult to learn, but unless it is learnt, to inoculate the cow-pox is folly and presumption." Another cause of the so-called failures was the want of care in those who performed the vaccinations. Jenner investigated many of the cases, and found that smallpox matter had been inserted into the arm on the third and fifth days after vaccination. Some of the cases, too, had been vaccinated in the variolous atmosphere of the Smallpox Hospital. This institution was founded in 1746 for the purpose of isolation and for inoculating the poor; long after the benefits of vaccination had been clearly shown, smallpox inoculation was practised at this hospital.

It was hardly to be expected that Jenner's discovery would escape the *odium theologicum*; many sermons were preached to show the wickedness of vaccination, and one preacher went so far as to try to demonstrate that the cow-pox inoculation was Antichrist.

GRANTS TO JENNER BY THE HOUSE OF COMMONS.

On March 17th, 1802, Jenner presented a petition to the House of Commons. In this he drew attention to what he had done almost single-handed for vaccination, and asked the House to grant him such remuneration as in their wisdom should seem meet. Stress was laid upon the fact that the new discovery was made known to all, and that the author of it, instead of reaping any pecuniary benefit, had been put to considerable expense. The

petition was referred to a Committee of the House under the chairmanship of Admiral Berkeley. The three heads of inquiry were: (1) The utility of the discovery itself, which is the foundation of the petition; (2) the right of the petitioner to claim the discovery; (3) the advantage, in point of medical practice and pecuniary emolument, which he has derived from it. The Committee sat from March 22nd until April 26th, and examined forty-five witnesses, including all the chief practitioners of the day. The report of the Committee on the three points submitted to them was: (1) The result is that the discovery of vaccine inoculation is of the most general utility; (2) the whole of the oral depositions, as well as all the written documents from abroad, are uniform and decisive in favor of Dr. Jenner's claim to originality in the discovery; (3) he has not only reaped no advantage from his discovery, but he has been a considerable loser by the persevering attention which he has bestowed upon this one subject to the neglect of his other business. . . . What his gain might probably have been if he had been solicitous to keep the secret within his own practice and that of his immediate pupils, as far as medical men in great practice themselves can form a conjectural opinion, may be collected from the testimonies expressed in Nos. 7 (Dr. Bradley) and 30 (Dr. Baillie), in which no more than justice is done to the liberality and public spirit of the petitioner in pursuing the propagation and extension of this important discovery, and in rendering it rather of universal utility to the human race than of emolument to himself.

Dr. Bradley stated that Jenner might have expected, if he had settled in town and kept this secret to himself, £10,000 a year at the present time (1802) and £20,000 within five years. Dr. Baillie told the Committee that Jenner "might have acquired a considerable fortune." It was pointed out that not only had he suffered loss in the way mentioned by Dr. Bradley, but that he had been put to great out-of-pocket expenses. His postages, home and foreign, came frequently to over £1 a day. So great was the call on Jenner's time and pocket by those who, in all parts of the world, were anxious to obtain information about the discovery, that he dubbed himself "Vaccine Clerk to the World."

In June, 1802, a debate arose in the House of Commons on the report of the Committee. Admiral Berkeley, the chairman of the Committee, explained portions of the report, and proposed that a grant of £10,000 should be made to Jenner. He stated that personally he thought the amount too small, and he should leave himself quite open to vote for a larger amount if an amendment to that effect were submitted to the House. The gallant Admiral put the matter in a plain, business-like form, to show the moderation of his proposal. There was plain evidence, he said, that Jenner had been the means of saving 40,000 lives per

annum in the United Kingdom only; taking each life as worth only 10s., there was due to Jenner £20,000 per annum. Sir Henry Mildmay thought the sum proposed quite inadequate, and moved that £20,000 be inserted in place of £10,000. Mr. Bankes opposed the grant on economical grounds; he acknowledged the utility and general benefit of the discovery, but thought that Jenner had it in his power to remunerate himself by practising vaccination. In his opinion, Jenner had made a mistake in imparting the secret to the public. Mr. Windham answered the objections of Mr. Bankes; and Sir James Sinclair Erskine pointed out that Jenner had come to London at great cost to render his discovery more useful, and that he had sacrificed his practice at Berkeley for this purpose. The Chancellor of the Exchequer said that whatever sum was voted to Jenner, one thing was clear, namely, that he had already received the greatest reward that any individual could receive—the unanimous approval of the House of Commons. The right hon. gentleman pointed out that no money value could be put upon the discovery, as it was beyond all calculation. The difference between £10,000 and £20,000 was not the standard by which the Committee of the House judged of the merit of Dr. Jenner, but the question of the amount had a reference to the duty which they owed to the public. The Chancellor thought that the vote would largely increase Jenner's practice, and that he would be thus indirectly benefited. To this Mr. Grey replied that there was no reason to expect such a consequence when everything attending the vaccine inoculation had been rendered so easy by Dr. Jenner's generous conduct. After Mr. Wilberforce and Mr. Courtenay had spoken both in praise of Jenner, a vote was taken by which it was decided that the grant should be £10,000. The numbers were: For the retention of the words ten thousand pounds, 59; against, 56; majority, 3.

On July 29th, 1807, the question of giving recompense to Jenner was again brought before the House of Commons by the Right Hon. Spencer Perceval (Chancellor of the Exchequer), who proposed that a second grant of £10,000 be paid to the discoverer of vaccination. In doing this Mr. Perceval referred to the previous grant, and pointed out that the intervening time had strengthened the general opinion as to the efficacy of vaccination and as to its great benefit to the nation at large. Mr. Shaw Lefevre stated the case of the antivaccinists; his main argument was that cases had been reported which were not successful. He, however, added: "I certainly shall oppose this vote; at the same time I ought to add that I do not know that I shall always persist in opposing it, for that my great object is to gain time and further opportunity to examine the report of the Royal College of Physicians." A long debate ensued, in the course of which Mr. Edward Morris, M.P. for Newport (Cornwall), moved that

£20,000 be substituted for £10,000. The reason given by Mr. Morris for his amendment was that "during the progress, thus judiciously withheld for a great number of years, it is almost impossible that he (Jenner) could have followed the ordinary duties of his profession; he must have sacrificed a great portion of his practice as a physician, so that the time which he devoted to the discovery of this inestimable remedy may be said to be time devoted to the interest of the public, and entirely at his own risk." Mr. Wilberforce stated that on the previous occasion he had voted for the smaller sum, but "that was at a much earlier period of the discovery than the present." Instead of giving Jenner either £10,000 or £20,000, he was in favor of granting £1,000 per annum, "because it looks more like a memorial of the affection and gratitude of his country, and more likely to point him out as a person possessing and enjoying the affection and gratitude of his countrymen who entertain a proper sense of the benefits they have received from him." It was pointed out that as the House was in Committee of Supply it could do no more than vote the supplies for the year, so that Mr. Wilberforce's proposal could not be adopted. The Chancellor of the Exchequer spoke in favor of the smaller amount, but the grant of £20,000 was carried by a majority of 13.

In looking at the small majorities by which these votes were carried, it must be borne in mind that the question on each occasion was not whether a grant should be made to Jenner or not, but whether the amount should be £10,000 or £20,000. Had the former question been the one before the House, it would have been carried with scarcely a dissentient voice. No truer estimate of the high opinion which educated men held of Jenner's character can be obtained than that which is evident in reading the reports of both these debates. Even where a speaker disagrees with the vote, or has doubts as to the efficacy of vaccination, there is not a word to be found derogatory to Jenner's good name. No better evidence of this unanimity can be given than that of Dr. Moseley, who was Jenner's most bitter opponent. In his anger he writes: "It will not be credited by future generations that both these large sums were granted by Parliament without even a symptom of controversial discussion. Party tongues were dumb, and the spirits of contention, which on subjects of much less importance to the human race have so often shaken the empire, were here absorbed in sympathetic composure and unity."

Official red tape was well illustrated in the payment of the first grant; there was considerable delay in handing over the money to Jenner, and when this was done nearly £1,000 was deducted for fees and costs. To some extent this was remedied in the second grant, as the resolution of the Committee distinctly

stated that the amount was to be paid "without any fee or other reward whatever."

JENNER'S PERSONAL CHARACTER.

In forming an estimate of any public man's character there is generally a *via media* lying between the too enthusiastic praise of well-meaning but perhaps not always strictly unprejudiced personal friends and the bitter malice of opponents. In very few instances is this more a fact than it is in Jenner's case. Baron was so great a worshipper of Jenner that his statements are sometimes warped by his affection for his friend. On the other hand, those who are opposed to vaccination, and cannot or will not see the benefits which the human race has derived from it, can hardly find words hard enough to express their contempt for Jenner.

That he was a great man of the stamp of John and William Hunter probably no one would assert. But he was a patient observer with a great love of Nature; probably dilatory and unmethodical: Baron's picture of him with his fossils scattered about rather points to this.

Of Jenner's manual dexterity Hunter evidently had not a very high opinion. To carry out some experiments for Hunter, Jenner had asked for a thermometer; the former sent the instrument, but in his letter says: "You very modestly ask for a thermometer; I will send you one, but take care that those damned clumsy fingers do not break it also."

His perseverance with his investigations as regards the cow-pox is plainly shown; in season and out of season he talks of it to his friends; so much so was this the case at the local societies to which Jenner belonged that he was, by his fellow-members, looked upon as having a bee in his bonnet, and it was intimated to him that a little less about his theory would be very acceptable. But in Baron and Gardner he had friends who did not tire and who urged him on in his work by their sympathy.

As a friend and companion he was evidently much appreciated by his neighbors at Berkeley; in all local affairs he took great interest, and his time for this purpose was, so far as his professional duties would permit, always freely at the disposal of his fellow townsmen.

Jenner was a man with a deeply religious mind; in this he was undoubtedly greatly influenced by the example of his wife. Some of his last words were: "I do not marvel that men are not grateful to me, but I am surprised that they do not feel gratitude to God for making me a medium of good." His very last public act was to attend a meeting at Berkeley for forming a Bible Society; at this meeting he moved the chief resolution.

Jenner's ideal of professional honor was certainly greater

than that of some of his contemporaries. When he had written out the account of his improved mode of preparing tartar emetic, Hunter writes off at once and suggests that Jenner should give the preparation a new name, and he adds: "I would have you to burn your book, for you will have all the world making it." Jenner was proof against this temptation to reap reward from the use of a secret remedy, and published his paper in the *Transactions of the Society for the Improvement of Medical and Chirurgical Knowledge*. It was also pointed out by persons very competent to express an opinion on the subject that Jenner might have reaped a rich harvest had he kept secret his method of vaccination. Benjamin Travers, writing in 1804, says: "You should not have acted in the manner you have; your liberality and disinterestedness every one must admire and extol, but you are sadly deficient in worldly wisdom." Again he writes: "If you had undertaken the extinction of the smallpox yourself, with coadjutors of your own appointment, I am confident you might have put £100,000 in your pocket, and the glory be as great and the benefit to the community the same." As is well known, Jenner made public his discovery at once, and never for a moment hesitated as to whether he might not be a richer man by keeping his information to himself.

Jenner was exceedingly fond of music and poetry; some of his verses still live in printed collections. His two best-known poems are perhaps "To a Robin" and "Signs of Rain." The latter was written as an excuse for not accepting the invitation of a friend to make a country excursion, and consists of the popular signs of coming rain ingeniously strung together in rhyme. As four specimen lines we may take the following:

The walls are damp, the ditches smell,
Clos'd is the pink ey'd pimpernel.
Hark ! how the chairs and table crack ;
Old Betty's joints are on the rack.

Although Jenner met with much opposition in the introduction of vaccination, and had to put up with misrepresentation and abuse in his own time, it has been reserved for certain persons in the present generation to speak of him as a charlatan, a shuffler, a fool, and a liar. Surely those who lived with him and knew all the circumstances of the case were better able to judge fairly of the character of the man than those who, living a century later, try to draw a picture of him by distorting facts, and by assigning some bad motive for all his actions. The debates in the House of Commons show clearly in what esteem Jenner was held by men of education in his own time. The bare fact that a man who was a simple country doctor, without any outside influence to assist him, should have risen to the position Jenner

held in his profession is a sure sign of the personality and character of the man.

The Medical and Chirurgical Society was founded by the *elite* of the medical profession, and amongst the names of the first Fellows we find that of Edward Jenner. Oxford University must have had a high opinion of his qualifications or the authorities would not have departed from their usual custom and granted him the Honorary Degree of Doctor of Medicine.

JENNER'S WRITINGS.

To the Medico-Convivial Society at Rodborough Jenner contributed several papers; one of these was on Angina Pectoris and another on Ophthalmia. Writing in the *Asclepiad*, vol. vi, p. 268, Sir B. W. Richardson states that "there is no written record bearing on these subjects left behind on which we can found any correct conclusions as to its originality." This is not quite correct, as Dr. Parry, in his "Inquiry into the Symptoms and Causes of the Syncope Anginosa," has given us a communication from Jenner on the subject. Dr. Parry writes as follows: "The substance of the following essay was originally read to a medical society in Gloucestershire. In that society the influence of the heart on the animal economy had often been the subject of discussion. It was generally admitted that many of the cases which are vulgarly called asthma originated, through different media, from diseases of that organ; and it was suggested by Dr. Jenner that the angina pectoris arose from some morbid change in the structure of the heart, which change was probably ossification, or some similar disease of the coronary arteries. To some questions which I have lately put to that excellent pathologist as to the series of observations which produced that opinion, I have received the following answer:

"The first case I ever saw of angina pectoris was that in the year 1772, published by Dr. Heberden, with Mr. Hunter's dissection. There, I can almost positively say, the coronary arteries of the heart were not examined. Another case of a Mr. Carter, at Dursley, fell under my care. In that, after having examined the more important parts of the heart without finding anything by means of which I could account either for his sudden death or the symptoms preceding it, I was making a transverse section of the heart pretty near its base when my knife struck against something so hard and gritty as to notch it. I well remember looking up to the ceiling, which was old and crumbling, conceiving that some plaster had fallen down. But, on a further scrutiny, the real cause appeared; the coronaries were become bony canals. Then I began a little to suspect. Soon afterwards Mr. Paytherus met with a case. Previously to our examination of the body I offered him a wager that we should find the coronary

arteries ossified. This, however, proved not to be exactly true; but the coats of the arteries were hard, and a sort of cartilaginous canal was formed within the cavity of each artery, and there attached, so, however, as to be separable as easily as the finger from a tight glove. We then concluded that malorganization of these vessels was the cause of the disease. At this very time my valued friend, Mr. John Hunter, began to have the symptoms of angina pectoris too strongly marked upon him; and this circumstance prevented any publication of my ideas on the subject, as it must have brought on an unpleasant conference between Mr. Hunter and me. I mentioned both to Mr. Cline and Mr. Home my notions of the matter at one of Mr. Hunter's Sunday night meetings, but they did not seem to think much of them. When, however, Mr. Hunter died Mr. Home very candidly wrote to me immediately after the dissection to tell me I was right. The appearances in Mr. Bellamy's case gave me the idea that the disease arose from a determination to the vasa vasorum, and that the concretions were deposits from the coagulable lymph, or other fluids, which had oozed out on the internal surface of the artery.'” Dr. Parry then proceeds: “With these observations of Dr. Jenner we were well acquainted in the society. Many of them were, indeed, communicated to us as they arose.”

There is no printed collection of Jenner's poetry. Several pieces are printed in Baron's *Life*; there are others in the collection of Jenner papers in the Library of the Royal College of Surgeons of England.

Observations on the Natural History of the Cuckoo, in a letter to John Hunter, Esq., F.R.S., *Phil., Trans.*, vol. lxxviii, p. 219.

A Process for Preparing Pure Emetic Tartar by Recrystallization, by Mr. Jenner, surgeon at Berkeley, in a letter to John Hunter, Esq., read June 4th, 1784, *Trans. of a Soc. for the Improvement of Med. and Chir. Knowledge*, vol. i, 1793, p. 30.

In the Library of the British Museum there is a pamphlet entitled *Cursory Observations on Emetic Tartar*, wherein is pointed out an improved method of preparing Essence of Antimony by a solution of Emetic Tartar in Wine. Wootton-under-Edge, printed by J. Bence, bookseller and stationer. There is no date, but at the end the pamphlet is signed “E. Jenner, Surgeon, Berkeley, Gloucestershire,” in Jenner's own writing. This work seems to have escaped the notice of previous writers on Jenner. The copy in question shows pretty conclusively that it ought to be included in the list of his books. The volume of tracts in which it is bound up at the Museum contains one pamphlet which originally belonged to Dr. Lettsom. It is probable that all the tracts were once his property, and that this one is a presentation copy; this would account for Jenner's signing it.

An Inquiry into the Causes and Effects of the Variolæ Vaccinæ, a Disease discovered in some of the Western Counties of England, particularly Gloucestershire, and known by the name of the Cow-pox, pp. iv, 75, 4 plates, 4to. London: 1798. Dedicated to C. H. Parry, M.D., at Bath. Preface is dated Berkeley, Gloucestershire, June 21st, 1798.

Again—2nd edition, pp. vii, 182, plates, 4to. London: 1800. Dedicated to "The King." Preface is dated Berkeley, Gloucestershire, December 20th, 1799.

Again—3rd edition, pp. vii, 182, 4 plates, 4to. London: 1801. The third edition consists of "The Inquiry," "Further Observations on the Variolæ Vaccinæ," "A Continuation of Facts and Observations, etc."

The "Inquiry" was also published in America, and translated into Latin and into nearly every European language.

There are two known manuscripts of the "Inquiry" in existence, one in the Library of the Royal College of Surgeons of England, and the other in the collection of Jenner relics belonging to Mr. Mockler. The former MS. is entirely in Jenner's handwriting, the latter in that of his brother-in-law, with notes and corrections made by Jenner himself. The College MS. has been examined by Professor Crookshank, who has come to the conclusion that it is the paper rejected by the Royal Society. This opinion is given mainly on the fact that Jenner had originally written in the MS.: "I shall produce many instances (I could produce a great number more), but the following, I presume, will be fully sufficient to establish the fact to the satisfaction of this learned body." In the MS. these last words are scratched out, and it is made to read "establish the fact very satisfactorily."

Before proving that this paper was rejected by the Royal Society, it will be necessary for the objectors to prove that it was ever received by that learned body. Undoubtedly Jenner originally intended sending the paper to the Royal Society, although Worthington advised him that it would be better to publish it as a pamphlet. What seems to have happened was that Everard Home took it to the Society and showed it informally at a Council meeting. It must not be forgotten that the theory was rather a startling one, and that at that time it was founded on one experiment only. There is not much to be wondered at in the Council referring the paper back to Jenner for further experiments to corroborate his views. Had the paper been formally presented by Home, and had it gone through the regular routine at the Society, there would be evidence of this in the Archives, but no one has ever been able to find any trace of it.

Professor Crookshank was evidently anxious to make the most of the Society which had "rejected" Jenner's paper. In the MS. at the College of Surgeons Jenner calls it "this learned

body." This Professor Crookshank, whilst professing to quote verbatim, has altered to "this very learned body."* This word "very" is again inserted in vol. ii, p. 9, where the differences between the MS. and the printed pamphlet are pointed out. Professor Crookshank states that this alteration is made "in a different handwriting." This is not so; the writing is undoubtedly by Jenner himself. It may be here noticed that the quotations from the MS. in Professor Crookshank's book are very incorrect. Jenner writes "malady," Professor Crookshank prints "distemper"; the MS. has "for the same purpose," this appears in print as "in the same manner." Many other instances might be pointed out.

Professor Crookshank writes (vol. 1, p. 264): "I was struck by the substitution, in the word *investigation* for *discovery*. Some friendly critic had evidently read the manuscript and made this correction, among others. Had Jenner made a discovery, and if so, what was it? . . . The correction of his critic was, therefore, fully justified." The page of manuscript in which this alteration is made is reproduced in facsimile, and it will be quite obvious to any one examining it that the word "investigation" is in the same handwriting as the rest of the manuscript, namely, in that of Jenner. The capital *I*, the peculiar *t* and the *g* in the middle of a word, are identical with similar letters in other parts of the manuscript. The "justification" of the critic thus falls to the ground. It may be mentioned that the alteration about "the learned body" is also made in Mr. Moekler's copy, which is somewhat earlier than the College one. This can be seen by comparing the two manuscripts. It is not necessary to labor the point as to whether this was the manuscript taken by Home to the Royal Society or not. Even if it could be shown conclusively that the Society did receive and reject the paper, the subsequent history of the work would prove, not that Jenner was wrong, but that the Council of the Society made a mistake in rejecting the paper.

Further Observations on the Variolæ Vaccinæ or Cow-pox, pp. 64, 4to. London: 1799. Dedicated to C. H. Parry, M.D., Bath. Dated Berkeley, Gloucestershire, April 5th, 1799.

A Continuation of Facts and Observations relative to the Variolæ, Vaccinæ or Cow-pox, pp. 42, 4to. London: 1800.

Instructions for the Vaccine Inoculation: a sheet. 1801. Printed by D. N. Shury, Berwick Street, Soho.

On the Origin of the Vaccine Inoculation, pp. 8, 4to. London: 1801. The preface reads: "I am induced to give the following concise History of the Origin of Vaccine Inoculation from my frequently observing that those who only consider the subject cursorily confound the casual cow-pox with the disease when

*History of Vaccination, vol. i, p. 253.

excited by inoculation.—EDWARD JENNER, Bond Street, May 6th, 1801." This pamphlet is very scarce, and was printed in 1863 by Mr. J. Brendon Curgenvén.

On the Varieties and Modifications of the Vaccine Pustule, occasioned by an Herpetic State of the Skin, pp. 13, 4to. Cheltenham: 1806. The preface is dated Berkeley, March 18th, 1806. Reprinted Gloucester, 1819. This was originally published in *Med. and Phys. Jnl.*, xii, 1804, p. 97, as a letter without any printed title; the headline of p. 98 is "Dr. Jenner, On the Effects of Cutaneous Eruptions;" on pp. 99 to 101. "Dr. Jenner, On Modifications of the Vaccine Vesicle."

Facts for the most part unobserved or not duly noticed respecting Variolous Contagion, pp. 15, 4to. London: 1808. Dated November 18th, 1808.

Observations on the Distemper in Dogs (read March 21st, 1809). (*Med.-Chir. Trans.*, i, 263.)

Two cases of Smallpox Infection communicated to the Fetus *in Utero* under Peculiar Circumstances, with Additional Remarks (read April 4th, 1809). (*Ibid.*, i, 269.)

Letter to William Dillwyn, Esq., on the Effects of Vaccination in preserving from the Smallpox. To which are added sundry documents relating to vaccination referred to and accompanying the letter. Pp. 20, 8vo. Philadelphia: Published by the Philadelphia Vaccine Society. 1818.

A Letter to Charles Henry Parry, M.D., F.R.S., etc., on the Influence of Artificial Eruptions in Certain Diseases incidental to the Human Body, with an Inquiry respecting the Probable Advantages to be derived from Further Experiments, pp. 67, 4to. London: 1822. This is dated Berkeley, 1821.

Some Observations on the Migration of Birds, by the late Edward Jenner, M.D., F.R.S., with an introductory letter to Sir Humphry Davy, Bart., Pres. R.S., by the Rev. G. C. Jenner. Read November 27th, 1823. *Phil. Trans.*, 1824, p. 11.

PORTRAITS OF JENNER.

Painting by Sir Thomas Lawrence, now in the possession of the Royal College of Physicians; half length, seated in chair. An engraving of this picture by W. H. Mote forms the frontispiece to the first vol. of Baron's *Life*, and is also the illustration to the Memoir of Jenner in Pettigrew.

Painting said to be by Sir Thomas Lawrence, in the possession of Mr. T. Malcolm Watson. On the back of the picture is the following written statement: "This original portrait of Dr. Jenner executed by Sir Thomas Lawrence was presented by him to his former pupil and intimate friend, Mr. Henry Wyatt, at whose death it became the property of his brother, Mr. Thomas Wyatt. The widow of the latter presented it to her sister, Mrs.

Edward Wunsch, of Glasgow, from whom I received it as a New Year's gift on 1st January, 1862.—THOS. WATSON." The present owner is the son of Dr. Thomas Watson, who wrote the above note.

Painting by James Northcote, painted for the Medical Society of Plymouth and Plymouth Dock; seated, fur collar, etc., right hand on paper bearing legend "Pustules of the Cow-pox in its successive stages." Engraving of the above by W. Say.

Painting by James Northcote, exhibited in the Royal Academy 1803; now in the National Portrait Gallery.

Portrait in Medley's group of the Founders of the Medical Society of London. Jenner was not in the original picture, but was subsequently introduced. The engraving by Branwhite was partly finished before this was done, and a piece of copper had to be let in the plate, so that Jenner's head and shoulders might be engraved on a spot previously occupied by background details.

Painting by William Hobday represents Jenner seated; cloak with fur collar round him; left arm rests on volume lettered "John Hunter"; paper relating to vaccination lying on table. Engraving of the above "begun by the late William Sharp," finished by William Skelton. Whilst sitting for his portrait Jenner wrote the following verse:

Ere you finish your job, Mr. Hobday, you'd better
On each of his legs clap a bit of a letter,
Or the doctor will presently show you some fun—
Yes, start from the canvas and certainly run.

J. R. Smith, engraving in mezzotint. Jenner is represented leaning against a tree; milkmaid and cows in the distance.

J. Hazlitt, jun. C. Turner, sculptor. London: Published October 20th, 1808, by J. Hazlitt, No. 109, Great Russell Street, Bloomsbury.

Oil painting. Artist unknown. In Royal College of Surgeons of England.

In the collection of portraits at the Royal Medical and Chirurgical Society there is a small photograph said to be "from an original portrait in the possession of Mr. William Smith, of Chesterfield."

Portrait by Vigneron, lithographed by C. de Lasteyrie, 1824. This was reproduced in the *Asclepiad*, vol. vi, p. 250. Also lithographed by Engelmann.

Portrait of Jenner in a cocked hat. *Hicks sc.* Published by Henry Fisher. Caxton. London: March 1st, 1823.

Miniature by J. Robinson. Jenner with pen, ink, and paper in front of him; cow lying down in back. This is in Mr. Mockler's collection. There is an engraving of this by R. M. Meadows.

Head on large scale, drawn and etched by H. E. Shrapnell. Oil painting, artist unknown. In Mr. Mockler's collection.

Medallion, J. B. Drayton, ad viv. del. Anker Smith, A.R.A., sculp. Published February 1st, 1823, by J. B. Drayton, Cheltenham, Gloucestershire.

Silhouette from the title page of Lettson's "Hints Designed to Promote Beneficence, Temperance, and Medical Science," vol. iii, 1801.

STATUES.

Bronze statue by Calder Marshall, R.A., now in Kensington Gardens. This statue was originally in Trafalgar Square, but was removed to Kensington Gardens in 1862. The cost was defrayed by public subscription raised by a committee, of which Dr. Conolly was chairman and Mr. G. V. Irving secretary. The statue was unveiled by the Prince Consort in May, 1858. An interesting feature of this ceremony was that amongst those who spoke was the Marquis of Lansdowne, who, as Sir W. Petty, had proposed the resolution in the House of Commons for the grant to Jenner. There is an engraving of the statue by J. Brown.

Statue by Sievier at the west end of the nave of Gloucester Cathedral, erected by subscription.

Statue at Brunn, in Moravia.

Bust by H. Corbould. A lithograph of this bust by R. J. Lane forms the frontispiece to vol. ii of Baron's "Life of Jenner."

Bust by S. Manning. Lithographed by M. Gauci, published by N. Chater and Co.; 33 Fleet Street, and Washbourn and Son, Gloucester, August 10th, 1823.

Marble statue by Monteverde. Exhibited at the Paris Exhibition of 1878. Now at Boulogne. Jenner is represented vaccinating a child.

There is also a memorial window in Berkeley Church with the following inscription: "The east window in the chancel was erected October, A.D. 1873, by voluntary subscriptions to the memory of the late Edward Jenner, M.D., the discoverer of vaccination, who was born in this parish A.D. 1749, and died at the Chantry, Berkeley, A.D. 1823, and was interred in the northeast corner of the chancel."

MEDALS.

The description of the medals in the following list is taken from an interesting paper by Dr. Storer in the *American Journal of Numismatics*, 1894 and 1895.

Obverse: Apollo presents a sailor who has been preserved by vaccination to Britannia, who holds a civic crown bearing JENNER. Legend, ALBA NAUTIS STELLA REFULSIT, 1801. *Reverse*: An anchor. Above, GEORGIO TERTIO REGE. Below, SPENCER DUCE (Viscount Althorp, First Lord of the Admiralty, and subsequently Earl Spencer). Presented to Jenner by the surgeons of the British Navy. Its locality is now unknown.

Obverse: DON. SOC. MED. LONDON. ANNO SALUT. 1773. INSTITUT. E. JENNER, M.D. SOCIO SUO EXIMIO OB VACCINATIONEM EXPLORATAM. *Reverse*: Apparently blank (the medal cannot be traced). Gold. Presented by the Medical Society of London, March 4th, 1804. Baron calls this medal "Gold Medal of the London Medical Society." The minutes of the Society show that it was a Fothergillian medal. On October 10th, 1803, a resolution was moved by Dr. Lettsom and seconded by Sir J. Hayes: "That it be recommended to a future meeting of the Council to consider the propriety of respect to the discoverer of vaccine inoculation." On November 7th, 1803, it was resolved, on the motion of Dr. Lettsom, seconded by Dr. Bradley, to present to Jenner "a gold medal, value 10 guineas, struck from the Fothergillian die, and accompanied with a suitable inscription." November 21st, 1803: "Dr. Sims, Dr. Pinckard, Dr. Yellowly, and Mr. Aikin were nominated a committee to consider of an address to Dr. Jenner, and of an inscription for the medal voted by the Society to be laid before the Society at the ensuing meeting." November 28th: The report of the Committee was brought up and various inscriptions were proposed, all of which were referred to a future meeting. February 13th, 1804: It was resolved that the motto to the gold medal to be delivered to Dr. Jenner be the following: "E. Jenner, socio suo eximio ob vaccinationem exploratam." Dr. Lettsom was requested to present the medal at the ensuing meeting, and "to add any remarks that may appear to him worthy of the attention of the Society." Jenner was unable to attend the meeting on March 8th, 1804, and received the medal personally. Dr. Sims was therefore appointed to receive it on Jenner's behalf. The address delivered by Dr. Lettsom is printed in the *European Magazine*, vol. xlv, p. 163.

Obverse: An allegorical group. *Reverse*: EDUARD JENNER, DOCTOR IN DE GENESKUNDE, GEBOREN DEN 17 MEY, 1749, TE BERKLEY IN HET GRAAFSCHAP GLOCESTER IN ENGELAND EN ALDAAR OVERLEDEN, DEN 26 JANUARIJ, 1823, UITVINDER DER KOEPOKINENTING IN HET JAAR, 1775, DOCH EERST IN 1798 DOOR HEM BEKEND GEMAAKT. Copper. By A. Bemme, at expense of H. Westhoff, jun.

Obverse: Between a rose bush and a cornucopia an infant with rose in hand points to its arm. At right of bush: L(OOS). Inscription: EDUARD JENNER'S WOHLTHAETIGE ENTDECKUNG. Exergue: vom 14 MAI 1796. *Reverse*: ZUM ANDENKEN AN ERHALTENEN UND MITGETHEILTEN SCHUTZ (a scroll) GERECHT VON DOCTOR BREMER IN BERLIN. 1803. Silver.

As preceding, save upon reverse there follows after SCHUTZ —, and after Berlin: —

Obverse: Bust, to left. Beneath shoulder: F. LOOS. Inscription: EDUARD JENNER ENTDECKER DER SCHUTZ IMPFUNG. D.

14 MAI 1796. *Reverse*: An angel from clouds garlanding a cow around which seven children are dancing. Legend: EHRE SEY GOTT IN DER HOHE. Exergue: UND FREUDE AUF ERDEN. Silver, bronze.

Obverse: As preceding, save that engraver's name is in exergue. *Reverse*: Hygeia, with serpent upon her right arm, protects by a shield bearing a cow and infant against a flying demon. Legend: TRIUMPH ! GETILGET IST DES SCHEUSALS LANGE WUTH. Silver, bronze, Berlin iron.

Obverse: A child between a rose tree and a rising sun exhibits its arm; at its feet a serpent. Legend: DANK DER GUTIGEN VORSEHUNG. Exergue: Kruger. *Reverse*: Within a pearled octagon: WOHL THATIGE ENTDECKUNG DER SCHUTZPOCKEN DURCH ED. JENNER. Silver.

Obverse: Bust, facing, within palm branches. Inscription: EDWARD JENNER. To left: HAMEL ET LECOMPTE. Beneath: 1749 (the date of Jenner's birth). *Reverse*: Between laurel branches: MEDAILLE DE 1RE CLASSE. Inscription: COMITE CENTRAL DE VACCINE DU DEPARTEMENT DU NORD. Silver.

Obverse: Like preceding, but bust somewhat towards the left and on pedestal, on the base of which is the date. *Reverse*: A laurel wreath, beneath which: MEDAILLE DE 2E CLASSE. Field vacant for name of recipient.

Obverse: Bust upon an oval shield between two females holding over it a crown. Beneath, an elongated shield upon which is a cow, to right. *Reverse*: Blank. Plaster-of-Paris.

Obverse: Bust, clothed, to left. Upon truncation: (T. R.) Poole, 1809. No inscription. *Reverse*: Blank. Of pinx wax upon colorless transparent glass. (In Library of the Royal Medical and Chirurgical Society of London.)

LIST OF DIPLOMAS, HONORS, ETC.

Chronological list of diplomas, honors, addresses, presented to Jenner, compiled from the Appendix to Baron's "Life."

Several of these diplomas are in the collection of Jenner relics formed by Mr. Mockler.

1801. February 20th. Plymouth Dock. Address from Dr. Trotter and forty-four medical officers of the navy, subscribers to the Jennerian Medal.

May 29th. Address of respect and application for imbued threads, from the "Physician delegated" of the Department de l'Agogna (Cisalpine Republic).

16 Thermidor. Address from the Bureau of the National Institute of France, and thanks for the dissertation communicated to them.

September 14th. Diploma of Fellow of the Royal Society of Sciences at Gottingen.

1802. February. Certificate of the success of Vaccine Inoculation, and complimentary address thereupon, from the staff of the Manchester Infirmary.

February 20th. Diploma of Fellow of the Physical Society of Guy's Hospital.

February 25th. Testimonial and address from the Presidents and members of the above Society.

March 7th. Diploma of Fellow of the Royal Medical Society of Edinburgh.

24 Ventose. Diploma of Foreign Associate of the Medical Society of Paris.

30 Germinal. Official address from the Medical Society of Indre et Loire.

May 25th. Diploma of Fellow of the American Society of Arts and Sciences.

July 29th. Official letter of respect and congratulation upon the general success of vaccination in France, from the Central Committee of Vaccination.

August 10th. Letter from the Dowager Empress of Russia, signed "Marie," and accompanied by a ring set in diamonds.

2 Messidor. Diploma of Corresponding Associate of the Medical Society of Tours.

27 Brumaire. Appointment of Associate from a Society at Avignon.

1803. March 16th. Diploma of Member of the Society of Medicine at Avignon.

August 11th. Freedom of the City of London, presented in a gold box of the value of 100 guineas. The gold box mentioned was sold by auction on October 25th, 1893, by Messrs. Debenham, Storr and Son. It was described in the catalogue as "A magnificent 18-karat gold presentation snuff-box, beautifully enamelled, with the arms of the City of London and other subjects, and bearing an interesting inscription, date 1803, 11 ozs. 11 dwt." The inscription reads as follows: "Presented to Edward Jenner, M.D., LL.D., F.R.S., etc., by the Corporation of London, 11th August, 1803, in the Mayoralty of the Right Hon. Charles Price, M.P., as a token of their sense of his skill and perseverance in the discovery of and bringing into general use the vaccine inoculation." In describing it as a "snuff-box" the auctioneers fell into error. At the sale the casket fetched what it originally cost, 100 guineas. It is now the property of the Society of Apothecaries. The document originally contained in the box is in Mr. Mockler's collection of relics.

August 15th. Diploma of Fellow of the Royal Medical and Economical Society of Madrid.

August 31st. Diploma of LL.D. from the Senate of Harvard University.

September 14th. Diploma of Honorary Member of the Royal Humane Society of London.

28 Vendemiaire. Diploma of Foreign Associate to the School of Medicine in Paris.

21. Frimaire. Diploma from the Society of Medicine, Departement du Gand.

1804. March. Freedom of the City of Dublin.

April 7th. Diploma of Member of the American Philosophical Society.

October 31st. Freedom of the City of Edinburgh.

December. Diploma of Fellow of the Imperial University of Wilna.

1806. March 31st. Diploma of Foreign Associate of the Royal College of Physicians at Stockholm.

May 20. Diploma of Honorary Fellow of the Royal College of Physicians at Edinburgh.

1807. March 5th. Diploma of Honorary Associate of the Royal Economical Society of Valencia.

April 1st. Freedom of the Borough of Liverpool.

April 23rd. Diploma of Foreign Associate of the Royal Academy of Sciences at Stockholm.

November 8th. Address of the Five Nations of Indians assembled in Fort George in Upper Canada. With the address was sent a belt and string of wampum.

1808. March 28th. Diploma of Fellow of the Royal Academy of Sciences at Munich.

May 25th. Diploma of the New Hampshire Medical Society.

June 20th. Diploma of Corresponding Member of the National Institute of France in the class of Physical and Mathematical Sciences.

September 1st. Freedom of the City of Glasgow.

1809. April 27th. Freedom of the Burgh of Kirkcaldy.

1810. April 27th. Diploma of Honorary Member of the Literary and Philosophical Society of Manchester.

1811. May 13th and 19th. Diploma of Foreign Associate of the Imperial Institute of France in the class of Physical and Mathematical Sciences.

1813. December 3rd. Diploma of Doctor of Medicine of the University of Oxford. This was a great honor to Jenner, as the granting of an Honorary M.D. by the University is a very rare occurrence.

1814. July 1st. Diploma of the Royal Society of Medicine at Bordeaux.

October 20th. Address of the Inhabitants of Brunn, in Moravia.

1815. January 20th. Address of Honorary Associate of the Physico-Medical Society of Erlangen.

1821. March 16th. Appointment of Jenner as Physician Extraordinary to H.M. King George V.

1822. August 30th. Diploma of Foreign Correspondent to the Medico-Chirurgical Society of Berlin.

VACCINATION AND COMMON SENSE.*

BY T. D. ACLAND, M.D. OXON.,

Physician to St. Thomas's Hospital.

LADIES AND GENTLEMEN,—A great responsibility has been imposed upon you, that of judging in what way you will endeavor to protect yourselves and your children against smallpox. It is a duty which you owe to the great community, of which each one of you is a member, to come to a right decision, and you cannot avoid the responsibility.

I can well believe that, with all the conflicting and inaccurate statements which are made about vaccination, you must find it difficult to arrive at any sound conclusion on the subject.

I thank you for the opportunity which you have given me of putting before you some of the evidence, which has been sufficient at any rate to convince myself, that of all the weapons which have been devised for fighting smallpox, vaccination is the most efficient and the least harmful, and that there is absolutely no known substitute.

It has been maintained that other means, such as sanitation and quarantine, are more effectual safeguards against the disease than vaccination, and that to these is due the diminution in the death-rate from smallpox which has taken place during the last century.

As I shall show you, this diminution in the fatality from smallpox is in this country mainly in the early years of life. If it were due to sanitation, the same beneficent results ought to be shown in the death-rate from other diseases which are rightly considered as infantile disorders. But this is not the case. On the contrary, although the share of smallpox mortality borne by children (under five years of age) diminished greatly between 1851-1880, during which years vaccination was made compulsory, there is no corresponding diminution in the share of the death-rate in children of the same age from other infantile disorders, such as measles, scarlet fever, diphtheria, etc. The actual figures are given in the following table, quoted from McVail, which shows how the contributions made by children under five years of age to the total mortality from each disease have altered :

*An address delivered at the Annual Meeting of the Subscribers to the Hospital Saturday Fund at the Mansion House on March 22nd, 1902.

Table showing that if the Death-rate as given at all Ages be taken as Unity, then the Death-rate for Children under Five Years of Age will be as follows:

	1851-60	1861-70	1871-80
From all causes.....	3.0	3.0	2.9
“ <i>small-pox</i>	4.7	4.0	2.2
“ measles.....	6.8	6.8	6.8
“ scarlatina.....	4.7	4.7	4.8
“ diphtheria.....	4.0	4.1	3.9
“ whooping-cough.....	7.2	7.2	7.1
“ fevers (including typhus, typhoid, and ill-defined).....	1.5	1.4	1.3
“ diarrhea.....	4.9	5.6	6.1

Calculated from pp. 112-114 of the Registrar-General's Supplement to the Forty-Fifth Annual Report, 1871-80.

It will be seen that whilst the proportion of deaths from small-pox contributed by infants has so greatly diminished, there is no corresponding diminution in the other infantile disorders mentioned, and in two the proportion is actually greater.

It would seem, then, probable, at any rate, that there must be some other agency than sanitation at work to account for the diminution in the infantile death-rate from smallpox. It has been suggested that quarantine and the isolation of all those who have been exposed to the infection of smallpox would suffice to stay a local outbreak; but in any large community such means are impossible and hopelessly inadequate, and must break down as they did under the very limited strain of the local outbreak at Leicester in 1893; and even if they were adequate, it is difficult to see why the protection should be exerted especially on the children and not on the adults, since smallpox was, and now is, amongst the unvaccinated, a disease falling with special severity on the earlier years of life. There must be some other factors at work. I will endeavor to lay before you some of the evidence there is to show that this factor is vaccination:

You will hear all kinds of bad things said about vaccination, of which I will tell you a few.

1. It is said that, as vaccinia and smallpox are totally distinct diseases, it is impossible for vaccination to protect against smallpox.

2. That vaccinia is nothing but smallpox artificially transmitted through the cow, and that statistics show that not only does vaccinia not protect against smallpox, but that it actually causes that disease.

Now, I think you will admit, in fact we must all admit, that these statements, being diametrically opposed to each other, cannot both be true; I will only, therefore, add a few words of practical criticism on each of them.

As to the first statement, “That vaccination cannot protect

against smallpox because it is a totally distinct disease," every one who thinks at all will allow that, if it can be shown that vaccination does in fact afford protection, this objection falls to the ground.

As to the second point, "That vaccination does not protect against smallpox, but actually causes the disease," I can speak with some confidence, since for seven years I was medical officer to the Royal Commission on Vaccination, and was engaged in making inquiries into vaccinal injuries throughout the length and breadth of the kingdom. During that period many millions of vaccinations were performed, and I have never seen or heard of an authentic case of small-pox resulting from vaccination in this country.

3. There is still a third objection which is frequently urged against vaccination, namely, that the harm done by it and the risks which it involves are so great that there is no justification for the practice productive only of evil and powerless for good.

If you will have patience with me, I will endeavor to show you how very far from the truth both these statements are. Before doing so, however, I should like to say that we know, even if all goes well, that a vaccinated child suffers something, and is an increased care and anxiety to an often overworked mother. No one can sympathize more than I do with the trouble and distress which may thus come to mother and child through the second week of even a normal vaccination. Sometimes, when all does not go well—when there is inflammation of the arm, or ulceration of the pocks—the burden thus imposed on the mother is heavier, and the suffering to the child is greater, and in some few instances the injury may be severe. It cannot be denied that in the case of a working man such trouble in the house may be a serious one, and it must be looked upon as a sacrifice, which he is asked to make for the good of the State as well as for the good of his child.

To return to the consideration of vaccinal injuries. Calculating from the cases which were brought under the notice of the Royal Commission on vaccination during the years 1889-96, and from the cases inquired into during 1888-91 by the Local Government Board, it would appear that there was death or serious injury in one case in about 14,000 primary vaccinations. You may say that even this amount of harm ought not to be, and the fact that it does occur is a powerful argument against vaccination. Before accepting this conclusion you must take into consideration that more than half (57.6 per cent.) of these cases resulted from preventable causes—that is, from one or other of the various forms of inflammation. Further, when you consider the ease with which the vaccine pocks may be injured, rubbed, or fouled, and when you consider the terrible conditions under which, unfortunately, thousands of our fellow working men have to live, it is hardly to be wondered at that an open wound like vaccination does sometimes go wrong.

All things occasionally go wrong in this imperfect world, and wherever you turn you will find a certain amount of penalty has to be paid for everything we have, however valuable and beneficent it may be. Gas explosions, railway accidents, shipwrecks, fires, all contribute something to the sorrow and suffering of the world, yet no one in his senses would give up gas, or railways, or ships, or houses because some injury is caused and some lives are lost by their use. Surely it is a question of degree. It is no use in the presence of an enemy discarding a weapon because you fear it may not be absolutely free from danger to yourself, unless or until you have something better to substitute for it. In the case of smallpox there is no substitute, and if you discard vaccination you are left defenceless and without any protection but flight in the presence of a relentless foe. It cannot even be pretended that the practice of vaccination hinders the adoption of every other useful means of combating smallpox.

When first I began to consider these questions seriously, I cast about for something with which the risk caused by vaccination (infinitesimally small though it really is) might fairly be compared, and I came to the conclusion that the use of anesthetics (chloroform and ether) was on the whole the greatest blessing which my profession had ever been able to confer on suffering mankind. Now, as you are all aware, a certain number of deaths occur every year through the use of anesthetics; this is quite unavoidable. The percentage number of deaths from chloroform is nearly seven times as great as that from the complications or accidents of vaccination. The deaths from ether are considerably fewer than from chloroform, but, even so, the total directly traceable to anesthetics is considerably greater than that resulting from vaccination.

It is interesting to compare the numbers of vaccinal injuries with the fatality from smallpox (even in a mild epidemic) where the practice of vaccination has been allowed to lapse. In Leicester, during the outbreak of 1891-92, 100 unvaccinated children were attacked, of whom 12 died. Thus in this community (with an unvaccinated child population), with all the boasted safeguards of isolation and sanitation, as many children died from smallpox as, according to the calculation given above, might be estimated to die or to suffer from serious injury amongst a like number of children (100) in 1,680 years, or in about 169,908 vaccinations. During this same epidemic only two vaccinated children under ten years of age were attacked by smallpox, neither of whom died.

In a severe epidemic, such as that at Gloucester (1895-96), no fewer than 279 unvaccinated children under ten years of age died out of 680 attacked (41 per cent.). Such fatality would not occur in less than *three million* primary vaccinations, and a very

little calculation will show that the risk of a fatal issue amongst those attacked was just 6,000 times as great as from vaccination. Comment is unnecessary, but the facts are deserving of serious study. They seem to me to show quite clearly that, although there is a certain amount of risk in vaccination, the risk is so small that it is one which should be readily faced if it can be shown that vaccination is for the good of the individual and for the benefit of the State. A great deal has been written and said about the serious nature of the risks, but they are in fact very small, and are such as the members of my own profession readily incur for themselves, their wives, and their children, for though they know them better than anyone else can know them, they judge them to be, as they are, insignificant as compared with risks of smallpox.

It is the duty of every one of us, as far as in us lies, to prevent ourselves from becoming the centres of infection. As you are the judges in this case, and have to decide for yourselves whether vaccination is capable of affording protection against smallpox, it is only right that you should consider the credibility of the witnesses who bring forward their evidence for or against the practice. Every one will, I think, allow that if they want a good pair of boots they should go to a bootmaker, and if they want a good loaf of bread they should go to the baker; and similarly it might be expected that those who wish to learn about smallpox and its prevention would be wise to go to those likely to possess the most accurate knowledge of the disease, namely, those who have spent their lives in the practical study of smallpox.

You will find that the unanimity of opinion expressed by those who have so spent their lives as to the effect of vaccination is very striking, and that those who are opposed to vaccination are, almost without exception, those who have no very practical acquaintance with smallpox. There are armchair generals even in medicine, who prefer to sit at home and deal out what they consider destructive criticism to those who are in the midst of the fight rather than to be up and doing something for the good of the individual and the welfare of the community.

Means which might be adopted for Deciding the Question as to whether, and if so to what extent, Vaccination protects against Smallpox.

The question as to whether or not vaccination protects against smallpox, and if so in what degree, may be approached in various ways:

1. By vaccinating first, and inoculating with smallpox afterwards, a test which cannot, of course, be made in the present day, but I shall refer to this again.
2. By observing the effect of vaccination on particular groups

of persons exposed to the contagion of smallpox under more or less similar conditions.

3. By observing the comparative frequency with which smallpox attacks the vaccinated and unvaccinated in large communities, the degree of the severity of the attack in each of these classes, and the resulting death-rate.

4. By observing the effect of vaccination upon the age at which smallpox is most prevalent amongst those who have been vaccinated in infancy, and among those who have not.

May I here, in parenthesis, say what I mean by vaccinated, I mean efficiently vaccinated. It is well known that vaccination in infancy gives its most effective protection only for a certain number of years. It is necessary to bear this in mind, since there are many fallacies based on statements made to the effect that in adult life more vaccinated than unvaccinated persons suffer from smallpox. This statement is one of those falsehoods masquerading in the guise of truth, which, as I shall show later on, has but little justification, since a child vaccinated in infancy, although, in fact, vaccinated, does not continue to benefit to any large extent from the vaccination after from seven to ten years; and as regards liability to attack from smallpox, insensibly approximates to the condition of those who have not been vaccinated.

1. The method of testing the efficacy of vaccination by the subsequent inoculation of smallpox is, of course, now out of the question, since inoculation is forbidden by law; but it was frequently adopted by Jenner, who, in 1801, wrote "that upwards of 6,000 persons had been inoculated with the virus of cow-pox, and that the far greater part of them has since been inoculated with that of smallpox, and exposed to its infection in every rational way that could be devised, but without effect." This was, at any rate, an experimental inquiry on a sufficiently large scale, and, even if the problem was not capable of being finally solved in this manner, was sufficient to convince his contemporaries of the efficacy of vaccination.

2. The second method of attempting to estimate the utility or the reverse of vaccination is to study its effect upon limited communities living under approximately the same conditions. There cannot be any better illustration than the experience of the staffs of the various smallpox hospitals.

They are as follows:

In Highgate Smallpox Hospital, from 1836 to 1896—a period of no less than sixty years—one case of smallpox, and one only, occurred among the hospital staff, and he was the gardener, least exposed to infection, but not revaccinated. During the years 1883-1896 there were 137 nurses and attendants employed; 30 of these had previously had smallpox, but none of the others had suffered from the disease.

At the Sheffield hospitals the staffs numbered 143; of 80 who were revaccinated as adults, not one contracted smallpox, whilst of 62 who had not been vaccinated, six suffered from smallpox, as did one other who was not successfully revaccinated until he was sickening from the disease.

At Warrington, Homerton, and Fulham, the experience has been similar. I will not weary you with the details of these; it would not serve any useful purpose, since they merely confirm the conclusion that even the nurses, who are exposed to a concentrated form of infection, such as probably we never have to encounter, can be and are protected against smallpox by the simple expedient of revaccination.

To come down to quite recent experience. During the third week in February of this year a statement appeared in the daily press to the effect that out of a staff of 43 nurses employed in the Mile End Infirmary, 35 were revaccinated, and have not suffered from smallpox, whilst of the other eight who were not revaccinated seven had already contracted the disease.

Such a statement was not likely to be accepted without criticism and challenge, and, thinking it would be a good test case to put before you from the practical and common-sense point of view, I inquired into the facts, and I am sure that I may tender in your name, as well as my own, our best thanks to Dr. Harley Brooks, the medical officer of the infirmary, for the great amount of trouble which he has taken to reply fully to my inquiries.

The facts are as follows:

Early in January, 1902, there were forty nurses and two matrons on the staff of the Mile End Infirmary, and one nurse on sick leave, a total of forty-three; not one of them had had smallpox previously; of these thirty-one had been revaccinated at various dates up to two years before the outbreak. Four were revaccinated on January 28th and 29th (two of them unsuccessfully). None of these 35 contracted smallpox. Of the remaining eight, one was away on sick leave, leaving seven, who all suffered from smallpox. Of these, three were not revaccinated, and the remaining four all sickened with smallpox in two days (two cases), three days, and six days respectively after vaccination. Thus these four cases were incubating smallpox at the time they were revaccinated, and though it may not be strictly correct to say that none of the vaccinated cases suffered from smallpox, it is certain that none of the cases who were revaccinated before infection contracted the disease, and all the cases who suffered from smallpox were either unvaccinated or revaccinated only during the incubation period of the disease.

I may say here that vaccination within a short time after exposure to the infection of smallpox may be of some use in mitigating the attack, but that if delayed until the incubation period is

advanced it may be expected to exercise little or no influence on the result.

A similar and very striking object lesson may be learned from the records of the smallpox hospitals of the Metropolitan Asylum Board.

During the year 1901, amongst the patients admitted to these hospitals were twenty-one persons who had been employed in disinfecting work; not one of these had been revaccinated since infancy. I have made careful inquiries, and I am informed that not a single person, engaged in work similar to that of the twenty-one persons mentioned above, who had been properly revaccinated, is known to have been admitted during this period (1901). And further, that no official of the Board, all of whom were revaccinated when they commence their work, had suffered from smallpox during the year 1901.

Nine other cases were admitted to the Board's hospitals suffering from smallpox contracted in the discharge of their duties as sanitary inspectors, dustmen, and undertakers; of these, five had not been revaccinated, one was said to have been revaccinated forty, and one nineteen years ago, and one without success four years ago.

Further, during sixteen years, 1884-1900, more than 2,000 persons have been employed in the smallpox hospitals of the Metropolitan Asylums Board; of this large number—some few of whom, no doubt, were protected by a previous attack—only seventeen contracted smallpox, though constantly exposed to infection. Of these, four are known to have escaped revaccination, and the remaining thirteen are known to have been revaccinated after having been exposed to infection. From the dates at which the eruption appeared in these cases it is practically certain that every one of them had contracted smallpox before their revaccination could possibly have taken effect. Lastly, not one of the staffs of the hospital ships has ever died of smallpox, and not one has ever suffered from the disease for the last eight years (1893-1901).

During twenty years (1881-1901) the Board's ambulance service has employed over 1,250 persons; of these, four have contracted smallpox, one was unvaccinated and died, one had been unsuccessfully vaccinated and died, two had been duly revaccinated, they both recovered.

These are remarkable facts, and do not seem to me to justify any other conclusion than that these persons, constantly exposed to infection in a virulent form, were protected by the disease not by sanitation, not by isolation, not by any of the various remedies which have been suggested, but solely by efficient vaccination and revaccination such as is open to every one to obtain.—*British Medical Journal*.

BAD NAUHEIM.

THE first season at Bad Nauheim Springs has been a marked success, due to the wonderfully healing power of the Springs themselves, the natural beauties of the surroundings, and from the world-wide reputation of the Bath itself. The Baths have had, during the past year, a distinguished patronage from all parts of the world, especially from America, giving the Bath an international position not to be found in any other.

The grand ducal management expends upon the maintenance of all departments, the drinking springs, the Kursaal, the park, the seven bathhouses with their elegant cabinets, the promenades, the tennis and playgrounds, exceeding great care, which has always received the fullest recognition from and patronage of the guests.

The celebrated Karlsbrunn, newly inclosed in elegant quarters, is again in use. The greatest convenience for all patients now lies in the fact that the long wait for the preparation of the bath, which was in former years considered the greatest trial, has now entirely ceased.

This is on account of the new piping and other technical improvements in regard to the conduction of the water. The waters give a large amount of carbonic acid and are at a considerably higher temperature than formerly. The different forms of baths are the Sol, Thermal, Thermal-strom, Sprudel, and Sprudel-strom. The latter is well-known to be a healing factor of peculiar value not possessed by any other. There has been added this season the Thermal-sprudel bath, which has at once become very popular with the physicians.

The grand ducal Kurdirector has undertaken in the fullest manner to provide for the entertainment of the guests by arranging for frequent concerts, operas, etc.

Finally, a false report which has been spread abroad must be contradicted. Nauheim is not an expensive place; hotels and lodging houses are so numerous and so varied that everyone can be accommodated comfortably according to his purse.

DR. W. P. CAVEN, corner Gerrard and Church Streets, has decided to relinquish general practice and will from this date devote his time to consultation work.

DR. CAMPBELL MEYERS has this summer added a new wing to his Private Hospital for Nervous Diseases at Deer Park. This addition runs west from the main building, and adds much to the appearance of the place besides providing the increased room rendered necessary by the growth of this important work.

Proceedings of Societies.

CANADIAN MEDICAL ASSOCIATION.

THE thirty-fifth annual meeting of the Canadian Medical Association was held in the City of Montreal on the 16th, 17th and 18th of September, under the Presidency of Dr. Francis J. Shepherd.

As an evidence of the great success which attended this meeting, the fact that more physicians registered on the first day than at any other previous meeting, speaks volumes.

At the morning general session of the first day a resolution of regret at the recent death of Professor Virchow, which was at the same time one of appreciation for the great work of this eminent pathologist, was proposed by Professor Adami, seconded by Dr. Gardner, Montreal, and carried unanimously.

The meeting divided into sections, Dr. McPhedran, Toronto, taking the chair at the Medical Section, while Dr. O. M. Jones, Victoria, B.C., looked after the Surgical Section.

FIRST DAY.—MORNING SESSION.

MEDICAL SECTION.

Living Case, Splenic Anemia.—Dr. H. A. Lafleur, Montreal, presented a patient, a man in middle life. There was a tumor, a movable mass about midway between the lower ribs on the left side and the crest of the ilium, with pulsation, but not expansile, over the tumor. The first blood count, made in March, showed 75 per cent. hemoglobin, the red corpuscles 5,000,000; the white 6,400. A blood count was made again on the 15th September, 1902; showed 4,000,000, and 5,500 respectively. The tumor changed according to degree and distension of the stomach. There was absence of mobility.

Dr. Osler referred to the difficulty and the lack of complete mobility in diagnosing this case and of enlarged spleen being often clinically mistaken for something else. This was just one of those cases in which the diagnosis was more surgical than clinical.

Some Further Results in the Treatment of Tuberculosis.—Dr. J. H. Elliott, of the Gravenhurst Sanatorium, contributed

this paper. At a meeting of this Association in Toronto in 1899 a report was made upon 155 cases of pulmonary tuberculosis under Sanatorium treatment. This paper is a further contribution covering some 400 additional cases treated during the past three years. The nomenclature used in the classification of discharged patients is that adopted by Trudeau: "Apparently Cured;" "Disease Arrested;" "Much Improved;" "Stationary," and "Failed."

Five years' experience has shown that almost all of the patients discharged "apparently cured" remain perfectly well—of those with "disease arrested" many have progressed to good health at home by following the rules of life learned at the sanatorium, renewed activity of the disease, when occurring, having been as a rule due to unfavorable surroundings, or the necessity of again taking up unsuitable work.

Not the least important part of the work of a sanatorium is its educative influence. Each patient who returns home is a teacher of the value and importance of a hygienic life, to those who wish to retain their health, as well as those who are not strong.

Experience is demonstrating the immense amount of influence for good which results from a properly equipped and conducted sanatorium. It is unfortunate that there are not more of them. It is hoped that the attention of our philanthropists will be drawn to the crying need of such institutions, and that ere long we shall have a number of them in the various provinces of Canada.

Dr. Osler congratulated Dr. Elliott on the promising results which he has obtained. Two important points should be kept well in mind: First, early diagnosis, and, second, getting patient as soon as possible under proper professional control.

Dr. T. Walker, St. John, N.B., referred to the control the physician in the sanatorium had over the patient.

Dr. John Ferguson, Toronto, spoke of the positive advances that have been made along the line of the curability of pulmonary tuberculosis.

Dr. McPhedran, Toronto, emphasized training patients how to care for themselves at home. He believes, too, that it is true, that the neighborhoods of sanatoria are always areas where tuberculosis is always diminishing.

Pleurisy as Associated with Tuberculosis.—Dr. John Hunter, Toronto, read this paper. He first referred to the manner in which bacilli reached the visceral and parietal pleure through the sub-pleural, bronchial or tracheal lymphatic glands, and from the cervical mediastinal and peritoneal lymphatics; also from the tonsils. In arriving at a diagnosis of pleurisy, a vigilant search should be made for a possible tuberculous origin. One should not always consider the outlook gloomy, as with properly carried

out treatment, the progress is much more favorable than in pulmonary tuberculosis. In at least two-thirds of tubercular pleurisy it is a curable affection. The rapidity of the filling of the pleural cavity is especially characteristic of tubercular cases.

Dwelling upon treatment during convalescence, deep breathing should be practised very assiduously, and inflation with rubber bags is a valuable exercise. Then change to a suitable climate should be insisted on if the progress towards recovery be retarded.

Clinical Notes on Blood Pressure in Diseased Conditions.—Dr. A. E. Orr, Montreal. A. Gärtner's tonometer was shown and the manner of its use demonstrated. Four hundred patients at the Royal Victoria Hospital, Montreal, were experimented on. The normal pressure was found to be 110 to 120. Seventy cases of typhoid fever were recorded in different stages, showing an average blood pressure of 104.5 mm. It was highest, but still sub-normal, in the first week. There was only one death, which took place in a man of thirty-five years, when pressure was 105 on the tenth day, 110 on the twenty-first day; then three hemorrhages, and on the twenty-fourth day a fatal hemorrhage.

A large proportion of these had cold baths or cold sponging. Nineteen cases of chronic nephritis were recorded. Of this group the highest was 260; average 208.5. Of acute nephritis there were seven cases; only three of these showed high pressure. Of arterio-sclerosis twenty-seven cases were recorded; highest 110, sixteen being 150 and over; four from 130 to 145; three from 110 to 125; four sub-normal. The highest was in a man of seventy-two; glycosuria, no albumen.

Valvular disease of heart, forty-eight cases, including eleven cases of mitral regurgitation. In mitral stenosis eight cases were recorded, six being normal. Mitral stenosis with mitral regurgitation, fourteen cases. Eleven had practically normal tension. Aortic insufficiency, three cases. Myocarditis, four cases; one man aged sixty having pressure of 80. Hypertrophy and dilatation of heart of unknown causation, two cases, 120 and 110 respectively. There were eighteen cases with acute lobar pneumonia, with an average for the series of 92.7; only one death. Pleurisy, sixteen cases. Neurasthenia, eighteen cases; thirteen having normal pressure; three from 135 to 140; one of 160. In malignant disease, cancer of viscera, there were no high readings. Anemia, six cases, all being normal. Addison's disease, both in early stage; both normal. Purpura hemorrhagica, one case; normal. Puerperal septicemia, one prolonged case, ending in recovery, had extremely low blood count, 930,000; above normal. One gall bladder case with suppuration—a blood pressure of only 50 ten days before death.

One lead poisoning; three of jaundice; one of tubercular meningitis; two of diabetes; two of exophthalmic goitre; eight of acute articular rheumatism, heart not affected; chronic articular rheumatism, four cases, all normal; gonorrheal rheumatism, eight cases, six normal; rheumatoid arthritis, sixteen cases, six normal; gout, four cases.

There was one case of hemiplegia and fourteen of tabes dorsalis, eleven normal pressure; cerebral tumor, eight cases; general paralysis of insane, one case; Friedreich's ataxia, one with albuminuria, 140; one acute ascending paralysis, 140; two cases tic douloureux, one 130 during the attack. There was one case of epidemic influenza and thirty-six miscellaneous cases.

In discussing this paper, Dr. Osler considered it to be the best contributed article on the subject.

On the Technique of Recording the Venous Pulse.—Dr. W. S. Morrow, Montreal, gave a practical demonstration on the black-board and presented a living subject on this topic.

SURGICAL SECTION.

Amputation of the Upper Extremity for Sarcoma of the Shoulder Joint, Living Case.—By Dr. J. Alex. Hutchison, Montreal. The patient—a young woman—presented by Dr. Hutchison, gave a history of previous injury to the shoulder, followed by the development of a growth in the head of the humerus, accompanied by intense pain. An X-ray of the parts revealed the presence of a large growth which invaded the joint, and involved the scapula. The patient was in an extremely unsatisfactory condition for operation, and presented evidences of marked cardiac disease. The incision extended from the middle of the clavicle in front down over the pectoral regions to the lower part of axilla, and behind, passed over the scapula down to meet the anterior incision.

After severing the middle of the clavicle, the great vessels were ligated, the brachial nerves divided high up, the muscles divided and the scapula freed from its attachments. There was little hemorrhage, and the wound healed readily. Microscopic examination of the growth showed it to be a mixed spindle—and round—celled, myeloid sarcoma.

A Fatal Case of Secondary Hemorrhage Four Days Following the Removal of Adenoids.—By Dr. Perry G. Goldsmith, Belleville, Ont. This paper deals with the case of a child operated on by Dr. Goldsmith for obstructive deafness due to enlarged faucial tonsils. The operation was not unusual, and the condition of the patient, on the second and third day after the operation, was apparently satisfactory; on the fourth day, however, repeated and alarming attacks of hemorrhage set in, resulting fatally in a

few hours. There was no history of hemophilia. The patient was under the care of the family physician at the time of death, and as no post-mortem could be obtained, the cause of the hemorrhage remained unknown.

Occlusion of Posterior Naris.—By Dr. H. D. Hamilton, Montreal. The patient was a young man, aged seventeen, who complained of constant discharge from right naris, with complete obstruction of the same side. Duration of the condition, about twelve months. On examination, the patient presented a complete bony partition occluding the right side. Family and personal history was negative. Treatment: The bony wall was perforated and the opening further enlarged by graduated bougies.

On the Use of the Subcutaneous Injections of Paraffin for Correcting Deformities of the Nose.—By Dr. G. Grimmer, Montreal. Dr. Grimmer spoke briefly of various other deformities which had been corrected in this manner. In the preparation of the paraffin, it is first sterilized by subjecting it to high temperature. It is then injected by means of a sterilized syringe. In the case of the nose, the inner canthi of the eyes should be protected from the spreading of the paraffin by firm pressure applied to the sides of the nose by an assistant's fingers. After injection, the parts are molded by the operator as required.

After treatment: Collodion is to be applied to the needle puncture, and cold compresses, to control edema of the nose and eyelids.

Some possible dangers from the treatment are, paraffin embolism, and necrosis of the skin over the parts.

Dr. Grimmer exhibited two patients successfully treated in this manner; also two rabbits which had been subjected to similar injections.

The Telephonic Properties of the Inflamed Abdomen; a Sign not Hitherto Described, Due to Paralysis of the Bowel in Peritonitis.—By Dr. Geo. A. Peters, Toronto. In auscultating the abdomen with a view to ascertaining whether there was paralysis of the bowel in cases of appendicitis, typhoid perforations, traumatism, and other conditions which stand in a causative relation to peritonitis, Dr. Peters has observed that where the gurgling sounds due to the passage of gas and liquid in the bowel are absent from paralysis, the heart sounds are invariably very plainly present over the whole abdomen. In intense cases, particularly in children, both inspiratory and expiratory breath sounds may be heard. Dr. Peters' explanation of the phenomena is, unlike the healthy bowel—where the gas is retained in certain well defined and circumscribed compartments, each constituting a complete retainer in itself, with vital walls possessing a muscular tonicity under nervous control—the paralysed bowel, by reason of its

flaccid and atonic condition, permits an entire change in the disposition of the contained gas; the entire distended abdomen becomes, practically and acoustically considered, a continuous column of air or gas, of the precise principle of the stethoscope. The effect of this is further heightened by the rigid abdominal wall, which acts as a sounding-board. The prognostic significance would seem to indicate an unfavorable termination in those cases where the sign is very well marked in cases of septic origin.

A Case of Filariasis in Man Cured by Operation.—By Dr. A. Primrose, Toronto. A man from the West Indies suffering from lymph scrotum presented himself for treatment and gave a history of attacks of fever which suggested the presence of filaria. On examination of the blood one found the embryos present in large numbers. The embryo filariae were found in large numbers at night, but disappeared from the blood during the day. An operation was performed and a large portion of the scrotum removed. The excised tissue was carefully examined by teasing it in salt solution, and a parent worm was discovered and removed alive. This proved to be a female, and it was subsequently fixed and mounted in a suitable manner for microscopic examination. Subsequent to the operation the filaria embryos entirely disappeared from the blood, and the inference was that the parent producing the embryos had been removed by operation.

The parent worm was afterwards carefully studied by Dr. J. H. Elliott, M.D., Toronto, (late of the Malaria Expedition to Nigeria from Liverpool School of Tropical Medicine), and a report of his investigations with drawings of the worm formed a part of the paper as communicated by Dr. Primrose.

FIRST DAY.—AFTERNOON SESSION.

GENERAL SESSION.

Address in Surgery—The Contribution of Pathology to Surgery.—By Dr. John Stewart, Halifax, N.S. Owing to the unavoidable absence of Dr. Stewart, this paper was read by Dr. J. W. Stirling, Montreal. In this able address Dr. Stewart, in commencing, compared the struggles of the early surgeons for a scientific knowledge of their craft to the daring exploits of the early navigators of the fifteenth and sixteenth centuries—a parallel not altogether fanciful might be drawn between those pioneers of ocean travel and the early masters of our craft. They worked on two lines: the long, weary, and often fallacious track of empiricism, and the ample, but often disconnected road constructed by those whose chief aim was, in the words of him who led the vanguard, to “study and search out the secrets of Nature.”

The first advance came with the anatomist, Vesalius, "and day dawned with William Harvey, the Columbus of modern medicine," when he instituted the application of experimental methods to biological questions.

Finally came John Hunter, "The Father of Scientific Surgery," of whom Bilroth says: "From the time of Hunter to the present, English surgery has had something of grandeur and style about it."

But a great advance came from the study of plant life, and the researches of Schwann and Schleiden paved the way for the cellular pathology of Virchow, the basis of our present system of pathology. "And," said Dr. Stewart, "a shadow falls upon us gathered here, as we realize that the veteran master, the undisputed leader of pathological thought and progress for over fifty years, has fallen, and we unite in the desire to lay our spray of cypress on the tomb of him whom we all considered the greatest German of our time."

While with all these new acquisitions the pathologist went on his way rejoicing, the surgeon still lingered with anxious mind and heavy heart, for the question of questions to him was still unanswered,—the healing of wounds was the enigma of surgery.

By the close of the eighteenth century many scientific workers were satisfied the solution of this problem lay in the existence of pathogenic microbes; but it was reserved for Schonlein to prove in 1839 that tinea was due to the growth of a fungus. Later came Davaine and Chaveau, with their demonstration of the bacillus of anthrax.

And finally came Lister, "and," said Dr. Stewart, "the dark hemisphere rolled in one grand movement from its age—long penumbra into noon-day. Surgery, modern surgery, was born. In the chronology of our craft, time is divided into before and after Lister."

Lister, like Hunter, united in himself the pathologist and the surgeon, and, like him, worked on the lines of experimental pathology.

President's Address.—On the evening of the first in the Arts Museum Dr. Francis J. Shepherd, of Montreal, delivered the Annual Presidential Address. After welcoming the members, Dr. Shepherd spoke of the Dominion Registration Bill, which had been so ably pushed through, in face of many obstacles, by Dr. T. G. Roddick, and expressed the hope that no one province would decline to act in accord with the almost universal desire to see the bill finally made law. After a brief resume of medical progress, the speaker entered a protest against the freedom with which syphilitics are allowed to mingle with the community at large, often causing the innocent to suffer more than the guilty. "It is time," said Dr. Shepherd, "that the profession took this

subject up and educated the public to a better knowledge of sanitary laws." Passing on to the subject of modern laboratory teaching, the President said, after referring to the large sums of money that have been spent on the erection and endowment of laboratories for the encouragement of research work, "One danger of this great multiplication of laboratories is that it induces men to pursue original investigation who have not the true scientific spirit, and who are utterly unfit for such work. They frequently collect and publish a mass of useless and undigested material and therefrom draw inaccurate conclusions. All this will not redound to the credit of medical science. But," continued Dr. Shepherd, "I do not wish it to be inferred that I am opposed to the addition of modern laboratories to our medical schools, they are all necessary, but they must not supplant other work quite as important to a man who wishes to become a practicing physician or surgeon. Again, we must remember that the millennium will not be brought about by laboratories, nor will all scientific problems be solved by them. There is one laboratory which is not so much frequented now as when I was a student, I refer to the hospital wards. Students, while perhaps more scientific—I say scientific because nowadays every one who spends much of his time getting a scientific training—I may say that students, while perhaps more scientific (microscopical and mechanical), have not the intimate personal knowledge of disease which continued observation at the bedside gives them, so that when started in some out-of-the-way place without their scientific machinery, they are like fish out of water. It may soon be that they will not be able to diagnose a fracture without the X-rays, tuberculosis without getting bacilli in the sputum, and so on without end. Students are not taught to observe so accurately the evident symptoms of disease, and, as I say, are becoming mere mechanics who need an armamentarium, which only a great hospital or university can possess, to make an accurate diagnosis of an ordinary disease, the higher and more intellectual means of drawing conclusions by inductive reasoning are almost neglected. Mind you, I do not wish to disparage laboratory teaching, it is essential; but we can have too much of a good thing, and laboratories nowadays take up too much of the student's time in the latter years of his curriculum. The ordinary student should have a good working knowledge of laboratory methods, and this should be obtained chiefly during his first two years, but the refinements, if insisted upon, will be required at the expense of some more useful and practical information, for the average student can only hold so much knowledge—it is hopeless to attempt to put a quart measure into a pint pot."

Speaking of specialism, Dr. Shepherd held up the ideal of all-round knowledge. He thought all doctors should acquire a good

working knowledge of all specialties, but an excess of time should not be devoted to any one. A year or two of hospital work, followed by some experience in general practice, should be managed by anyone who wishes to become a broad-minded specialist. Referring to modern quackery and the inadequate ideas of many superficially educated practitioners, Dr. Shepherd said, "Many of the doctors who write to papers like '*The Alkaloidal Clinic*,' the '*Medical Short-Cut*,' and others of such a character, have a most misty idea of their profession, and apparently are ignorant enough to deceive themselves as well as the public. I fancy they practise all the pathys; one man from Texas asks the Editor if he had anything that is a 'dead-shot' for eczema, another asks what is the most 'up-to-date scientific caper' for goitre, and so on."

At the close of his most interesting address Dr. Shepherd paid a high tribute to the late Dr. Wyatt G. Johnston, Dr. Wm. S. Muir, of Truro, and Dr. Brunelle, of the Hotel Dieu.

SECOND DAY.—MORNING SESSION.

A general meeting of the Association opened with a discussion on *Diseases of the Gall Bladder and Bile Ducts*. Dr. Alexander McPhedran, Toronto, introduced the medical diagnosis in this discussion. He mentioned the fact that the gall ducts are narrower at their entrance to the bowel than in other parts of their lumen, and as they lie nearly horizontally the outflow of bile is easily retarded or obstructed. The ducts are much exposed to infection from the intestinal tract. Of the cardinal symptoms in these cases Dr. McPhedran considered jaundice the most common, while pain varies, but is generally intense. The attendant fever is generally due to toxic absorption. The main diseases to be considered in differential diagnosis are catarrhal and suppurative cholangitis and acute yellow atrophy. Most catarrhal conditions are infective, but the chills and fever may occur without pus formation. The most common germ present is the common colon bacillus. In the gangrenous cases the symptoms are often ill defined. A most characteristic sign of gall stone is the recurrence of the attack.

Dr. A. D. Blackader in discussing the treatment of gall bladder affections said he would confine himself principally to catarrhal forms of the disease. He considers the condition more commonly due to altered secretion of the bile ducts, the altered mucus causing inspissation of the bile. Infection of bile, he thought, takes place in two ways, through the bile ducts and through the portal circulation. In the matter of treatment he considers that no drugs stimulate the flow of bile to the same extent as the bile salts. The flow is increased by exercise and deep breathing. Diet should be carefully considered, should be

simple and as far as possible should contain a large amount of fat. Such patients should drink plenty of pure water or mineral water. The patient should also have due regard to a proper method of dress, no corsets or constricting clothing should be worn.

Surgical Diagnosis was introduced by Dr. James Bell, of Montreal. He said it was common to find early vague symptoms of gastro-intestinal indigestion, which were often found to be present for a long time before an acute attack was precipitated. He spoke of the colon bacillus and the typhoid bacillus as common causes of infective conditions.

The subject of *Surgical Treatment* was introduced by Dr. J. F. W. Ross, of Toronto. In commencing his paper Dr. Ross expressed a certain lack of faith in the so-called medical treatment of gall stones. Speaking of some details of gall-stone operations Dr. Ross advocated drainage through Morrison's pouch. He laid great stress on the free use of gauze packing to prevent leakage into the peritoneal cavity. In gangrene and empyema of the gall bladder he does not advise removal of the gall bladder but prefers opening, flushing, and draining. In many cases of cystic enlargement of the gall bladder, however, he advised entire removal of the viscus. It is well to remember, after removal of the gall bladder, that gall stones may form in the liver and be passed out into the intestines. He considers mucous fistulae which occasionally follow operation as the most troublesome, and said the evil should as far as possible be prevented by the use of a small drainage tube. He also drew attention to the importance of being sure that the drainage tubes did not become blocked.

The discussion of the Surgical Treatment was led by Dr. G. E. Armstrong, Montreal, who recognizes and recommends the employment of medicinal treatment first in gall stones, etc. He does not advise removal of the gall bladder for stone in the cystic duct. He recommends lavage of the stomach before operating on all gall bladder cases, and as it is difficult to know what the surgeon may encounter on opening the abdomen he advises the administration of calcium chloride before and after operation to prevent possible hemorrhage.

Dr. Dudley Allan, of Cleveland, Ohio, next spoke on the "Importance of Early Operation on the Gall Bladder." He considers, in view of the fact that an accurate diagnosis is often impossible, an exploratory incision at least should generally be made early, when, he claims, it is often found that many obscure cases are quite amenable to surgical treatment, and, in fact, would fail to recover if we were to temporize. He recited a number of cases where the diagnosis was uncertain, where he had made an exploratory incision and had often been gratified with the results.

The subject was further discussed by Sir William Hingston, of Montreal, and Dr. Alex. H. Ferguson, of Chicago.

On Foreign Bodies in the Vermiform Appendix.—By Dr. James Bell, of Montreal. In this paper the writer expresses his opinion that appendicitis never depends on the presence of foreign bodies in the lumen of the appendix. There is little doubt, however, that when foreign bodies gain entrance accidentally into the appendix they aggravate an otherwise septic infection. Among the foreign bodies which he has found in the appendix are: In two cases pins, in two cases seeds, in one case wood fibre, in one case gall stones, and in another case a fish bone.

Dr. Bell's paper was further discussed by Mr. Irving Cameron, of Toronto.

SECOND DAY.—AFTERNOON SESSION.

MEDICAL SECTION.

Kernig's Sign. The Frequency of Occurrence, Causation and Clinical Significance.—By R. D. Rudolf, Toronto. This paper contained the results of an investigation carried out in the different hospitals of Toronto. A large number of patients of all ages were examined suffering from divers troubles and the angles at the hip and knee accurately measured in over 200 of them. In 162 Kernig's sign was present in 97, that is, in over 60 per cent. It was always absent in perfectly healthy children. Dr. Rudolf considers that a more convenient plan is to extend the knee and then flex the hip as far as possible. Sometimes there is more than the usual degree of stretching of the ham-string possible, and this extra flexion can, by the writer's method, be exactly measured when Kernig's sign could not show it. Of the 97 cases in which Kernig's sign was present in 59, an angle of less than 165 degrees at the knee could only be obtained, and of these in 10 cases the angle was 135 degrees or less, showing a very marked degree of the sign. These 59 cases were of all kinds and only one of them was meningitis. Dr. Rudolf then went on to state that none of the theories of explanation of Kernig's sign were satisfactory as to its occurrence in meningitis.

Multiple Sarcoma. Report of a Case.—This case was reported by Drs. F. N. G. Starr and J. J. MacKenzie, of Toronto. Dr. MacKenzie read the notes on the case. No autopsy could be made of the case. The patient was a female, thirty-eight years of age, a seamstress. The personal or family history had no bearing on the case. For a number of years before 1901 the patient had a goitre, which, under treatment, almost disappeared in the winter of 1901. In April, 1901, a lump about the size of a pea was noticed slightly to the left of the middle line of the

abdomen near the symphysis pubis, hard but painless and subcutaneous. In May two or three appeared in the middle line an inch above the umbilicus; then two or three were discovered in the back. In June two others appeared to the right of the middle line of the abdomen. In July several additional lumps were discovered in the right breast, in size from a pea to a bean. Loss of weight occurred. In August the liver was noticed to be enlarging. Commenced taking arsenic in September. In October a large tumor appeared in the left breast, and a small one was also noticed in the left thigh. Patient began to suffer from rheumatic pains. In November and December the tumors appeared in enormous numbers over the chest and back, abdomen, thighs and arms above the elbows, neck and over back, sides and top of head. In January, 1902, chains of tumors, bean sized, were noticed in the cervical region, submaxillary and suboccipital regions. By March the 8th she had thousands of tumors, most quite hard. Excisions were made and microscopic examination revealed a type of spindle-celled sarcoma, in which the prevailing cell was very long. As regards treatment, the patient took arsenic with no influence on the condition. Thyroid extract produced slight diminution in the size of the tumors. Patient died. Without autopsy one cannot say where the primary seat of the disease was, although from the great involvement of the liver, that might be the source of the disease.

On Some Points in Cerebral Localization, Illustrated by a Series of Morbid Specimens and Some Living Cases.—At an early morning session held in the Royal Victoria Hospital. Dr. James Stewart conducted this clinic.

On the Asylum—The Hospital for the Insane and the Study of Psychiatry.—Dr. Stuart Paton, Baltimore, Md., advocated hospitals or wards in insane asylums for proper treatment of acute cases. He also pointed out the benefits to be derived from having medical men to form a consulting staff to an asylum.

Anesthetic Leprosy.—Two very interesting patients, father and son, were presented by Dr. C. N. Valin, Montreal, according to whom, they proved to a certainty the contagiousness of this disease. From the way they had progressed under treatment Dr. Valin considered the cases hopeful.

SURGICAL SECTION.

Report of Three Cases of Congenital Dislocation of the Hip.—By Dr. A. E. Garrow, Montreal. The etiology of this condition is not well established, but heredity seems to play a part. Dr. Garrow spoke of two methods of reduction: (a) bloodless method. (b) through an incision. The chief obstacle to reduction is generally due to fibrinous stricture of the lower part of the capsule. Dr.

Garrow's experience has been mainly by the open method. This paper was further discussed by Dr. Shepherd, of Montreal.

The Operative Treatment of Goitre, with a Report of Cases.—By Dr. Ingersoll Olmstead, Hamilton, Ont. As the medical treatment of goitre is very unsatisfactory, an operation is recommended in the following conditions: First, as soon as a goitre becomes dangerous, that is, when attacks of dyspnea or inflammatory changes occur, or there is the slightest suspicion of a malignant degeneration. Second, all enlarged thyroids having a tendency to grow towards the aperture of the thorax, even if they are movable. Third, goitres that have reached considerable development from the formation of single large colloid nodes. Fourth, when with a moderate goitre, symptoms like those of Basedow's disease appear, accompanied with an increased development of the goitre. The operation advised is the one usually performed by Kocher and is done under cocaine anesthesia. It consists of a transverse, symmetrically bowed incision, with its convexity downwards, from the outer surface of one sterno-mastoid muscle to the other, higher or lower according to the position of the goitre. The skin, underlying platysma and fascia of the sterno-hyoid and sterno-thyroid muscles are reflected upwards. The fascia joining the muscles in the median line of the neck is then divided as well as the outer fibrous capsule of the gland. The half of the gland which is most involved is then shelled out of its capsule, the superior and inferior thyroid arteries tied, the isthmus cut with goitre clamp and ligated. The remaining attachments are then ligated and portion removed. The wound is closed with subcuticular wire suture without drainage.

Twelve cases operated on during the past year were reported. The average stay in the hospital was seven days. The resulting scar was very slight and little or no pain was complained of during the operation.

The Pathologic Prostate and Its Removal Through the Perineum.—By Dr. Alex. H. Ferguson, Chicago, Ill. In opening his paper Dr. Ferguson said he proposed to discuss more particularly hypertrophy of the prostate. Some of the microscopic changes in the hypertrophied prostate are: First, increased weight, may be up to eight or nine ounces; second, greater size; third, any part or the whole of the gland may be involved. Shape varies very much. Microscopically Dr. Ferguson found all hypertrophied prostates were benign in character. He also found frequent evidences of inflammatory changes. The effects produced may be stated as, first, the prostatic urethra is contracted and elongated; second, the vesical meatus is often rendered patulous and sometimes obliterated; third, the ejaculatory ducts are also often patulous, allowing regurgitation of the semen into the bladder, and they are also often obstructed. The effects of obstruc-

tion on the kidneys and bladder are too well known to require discussion. *Treatment*.—Dr. Ferguson's method of removal is by the perineal route. He uses a prostatic depressor introduced into the urethra, then elevated in such a manner as to press the prostate down in the perineum. The fingers of the left hand are passed into the rectum as a guide, and then he makes one bold incision through the perineum down to the prostatic capsule. Dr. Ferguson exhibited some special instruments devised and used by himself in this operation.

The Surgical Treatment of Enlarged Prostate.—By Dr. G. E. Armstrong, Montreal. Dr. Armstrong exhibited a specially constructed suprapubic vesical speculum, devised by himself, with a lateral opening, which allows the prostate alone to come well into view in the speculum. The speculum can be packed around with gauze to protect the parts from possible burning, the offending lobe or lobes are then cauterized with the thermocautery. Dr. Armstrong reported seven cases successfully operated on. One point of advantage in this operation lies in the fact that the cauterized surface does not admit of septic absorption. He urges this method in early stages of prostatic hypertrophy.

The paper by Dr. Ferguson and also that of Dr. Armstrong was discussed by Dr. James Bell, Montreal; Sir William Hingston, Montreal; Mr. Irving Cameron, Toronto, and Dr. Elder, Montreal.

SECOND DAY.—EVENING SESSION.

At the evening session of the second day the *Address in Medicine* was delivered by Dr. Wm. Osler, Baltimore. In opening his splendid address Dr. Osler spoke of the noble ancestry of our profession. The broad foundations of our professional dignity were laid on the Hippocratic oath. The solidarity of the medical fraternity is pre-eminent. Our profession is distinguished from all others by its beneficence; witness, for instance, anesthesia, sanitation, *et al.* There is no limit to the science of medicine. The outlook for the profession was never brighter than to-day. Many of the diseases of our grandfathers are vanishing. Dr. Osler then put forward a strong plea for the unity of the profession. A sense of self-satisfaction is all too common in the medical ranks as in other walks of life. Chauvinism is an enemy to progress. Dr. Osler mentioned four forms of Chauvinism, namely, national, provincial, parochial and individual. Nationalism is apt to become a widespread vice in so far as this concerns the medical profession; however, international medical congresses have done much to dispel this spirit. Dr. Osler strongly advised young men to go abroad for post-graduate study, especially those who aspired to teach. If this were not possible he strongly recom-

mended the study of foreign medical literature. "It helps a man," said Dr. Osler, "to be a bit of a hero-worshipper." Continuing he said, "there is a remarkable homogeneity of the profession on this continent, still, there is no little provincialism among the profession. Witness the various provincial medical councils in Canada and the various state boards in the United States." He considers it an outrage that a graduate of Ontario cannot practice in Quebec, or a graduate of Quebec in Manitoba: it is democracy run riot; it is provincialism. The solution of this problem rests with the general practitioner. Dr. Osler here paid a high tribute to Dr. Roddick for his indefatigable energy in pushing through the Dominion Medical Bill. Passing on to speak of parochial Chauvinism Dr. Osler considered we are all tainted with it to some extent. A good method of counteracting this is to encourage professorial interchanges. Chauvinism in the unit, however, is of much more interest and importance. "The consultants do the writing and the talking—and take the fees," said Dr. Osler, "the backbone, however, of the medical profession is the general practitioner. But he should preserve his mental independence and keep up with the times in literature and appliances. "Diagnosis, not drugging, is our chief weapon of offence," said Dr. Osler. "Lack of systematic personal training in the methods of the recognition of disease leads to the misapplication of remedies, to long courses of treatment, when treatment is useless and so directly to that lack of confidence in our methods which is apt to place us in the eyes of the public on a level with empirics and quacks." One should not degenerate into a mere dispenser of quack nostrums like the drug clerk, who has a specific for everything from the pip to the pox. Beware of the huge manufacturing chemical concerns and of the "drummer" of the drug-house. Passing on Dr. Osler said that learning alone is not sufficient, culture is the bichloride to keep him from intellectual deterioration, and lastly, charity among the profession: make the golden rule our code of ethics. Adopt the motto of St. Ambrose: "If you cannot speak well of your brother, keep silence." The word of action is stronger than the word of speech.

The X-ray as a Therapeutic Agent.—By Dr. C. R. Dickson, Toronto. Dr. Dickson said, the explanation of the rationale of the X-ray is at best as yet but a hypothesis; fortunately we have a practical proof of its utility as a therapeutic agent in many conditions. Dr. Dickson has used it successfully in the following cases: Nevus, lupus vulgaris, tubercular joints, scleroderma, subacute articular rheumatism (it relieves pain in many cases), neurasthenia, carcinoma of the stomach (this patient gained weight), and in carcinoma of the rectum, which case is also improving.

Dr. G. P. Girdwood, of Montreal, read a paper on *The*

X-rays, *Diagnostic and Therapeutic*, and exhibited a number of photographs.

The X-ray in Cancer was the title of a paper by Dr. A. R. Robinson, of New York. A strong plea is that the X-ray largely does away with the knife, and leaves little scar. It is probable that all superficial cancers can be removed by the X-ray if seen early. In a delicate locality, such as the eyelid, the rays should always be used as paste or the knife will do more harm. When malignant growths have spread deeply, the X-ray may be considered our best treatment.

THIRD DAY.—MORNING SESSION.

SURGICAL SECTION.

The first paper was *Remarks on the Sympathetic Ophthalmia*.—By Dr. G. Herbert Burnham, Toronto, followed by a paper on the *Ocular Manifestations on Systemic Gonorrhoea*, by Dr. W. Gordon M. Byers, Montreal.

A paper on *Excision of the Cecum* was read by Dr. O. M. Jones, of Victoria, B.C. Dr. Jones cited four cases operated on. The first case lived about two years after. A *post mortem* proved that the cancerous growth had not recurred at the point of the original operation. Symptoms in all cases were griping pains in the abdomen, loss of weight and irregular action of the bowels, together with the presence of a mass in the region of the cecum.

On Three Cases of Perforating Typhoid Ulcer Successfully Operated on.—Dr. F. J. Shepherd, Montreal, reported these cases. First, as to technique. Dr. Shepherd has always made use of the lateral incision and has usually found the perforation near the ileo-cecal valve. By this incision the site of the perforation is more easily found than by the median. He has always closed the incision by turning in the bowel and making use of a continuous Lembert suture, employing fine silk. Other ulcerations in the neighborhood are treated in the same way. Rubber drainage is employed. There is always suppuration in these cases, and usually a hernia as a result. General anesthesia is always used in these cases. Early and rapid operation, seeing that there are no others likely to perforate. The first case was in a woman of thirty with ambulatory form. The second was a woman twenty-eight years, admitted on about the eighth day. It is of interest in this case that although perforation had taken place there was no leucocytosis. The third was a male, aged thirty, in the third week, seized with severe pain and one hour after there was obliteration of liver dulness and marked leucocytosis. All are quite well with the exception of hernias.

Dr. Laphorn Smith, of Montreal, presented a paper on *A*

Case of Total Extirpation of the Urinary Bladder for Cancer. General considerations; evolution of the operation in Europe and America; methods employed; results in 100 reported cases. In the author's case there had been previous removal of fibroid by myomectomy. This was followed by cystitis, which was treated first by medicine, then by injection, and afterwards by drainage by permanent catheter, and then by button-hole operation; when the cancer was detected by the finger. Extraperitoneal removal of bladder and affected part of ureter and pelvic glands. Recovery from operation, but death on the seventh day from exhaustion.

THIRD DAY.—GENERAL MORNING SESSION.

Election of Officers.—Dr. T. G. Roddick, M.P., Chairman of Nominating Committee, presented the report of this committee. London, Ont., was selected as the next place of meeting.

President—Dr. W. H. Moorhouse, London, Ont.

Vice-Presidents—Prince Edward Island, James Warburton; Nova Scotia, John Stewart, Halifax; New Brunswick, W. C. Crockett, Fredericton; Quebec, Dr. Mercier, Montreal; Ontario, Dr. W. P. Caven, Toronto; Manitoba, Dr. McConnell, Morden; Northwest Territories, J. D. Lafferty, Calgary; British Columbia, C. J. Fagan, Victoria.

Local Secretaries—Prince Edward Island, C. A. MacPhail, Summerside; Nova Scotia, Dr. Morse, Digby; New Brunswick, J. R. McIntosh, St. John; Quebec, R. Tait McKenzie, Montreal; Ontario, Hadley D. Williams, London; Manitoba, J. T. Lamont, Treherne; Northwest Territories, D. Low, Regina; British Columbia, L. H. McKechnie.

General Secretary—George Elliott, 129 John Street, Toronto.

Treasurer—H. B. Small, Ottawa.

Executive Council—Drs. Moore, Eccles, and Wishart, London, Ont.

Dominion Health Bureau—Dr. E. P. Lachapelle, Secretary of the Board of Health of the Province of Quebec, moved the following resolution, seconded by Dr. J. R. Jones, Winnipeg, which was carried unanimously:

“Whereas public health with all that is comprised in the term “sanitary science,” has acquired great prominence in all civilized countries; and,

“Whereas enormously practical results have been secured to the community at large, by the creation of health departments, under governmental supervision and control; and

“Whereas greater authority and usefulness are given to health regulations suggestions when they emanate from an acknowledged Government Department:

" *Therefore, be it resolved*, that in the opinion of the Canadian Medical Association, now in session, the time is opportune for the Dominion Government to earnestly consider the expediency of creating a separate department of public health, under one of the existing ministers, so that regulations, suggestions, and correspondence on such health matters as fall within the jurisdiction of the Federal Government, may be issued with the authority of a Department of Public Health.

" That copies of this Resolution be sent by the General Secretary to the Governor-General in Council and to the Honorable the Minister of Agriculture."

Treasurer's Report.—Dr. H. B. Small presented this report. Three hundred and seventeen members had been in attendance, nearly one hundred larger than any other previous meeting. All outstanding indebtedness had been paid and there was in the treasury \$325 to the good of the Association. This announcement was received with the greatest satisfaction. Votes of thanks were passed to Mr. and Mrs. James Ross, of Montreal, in whose handsome grounds had been tendered a garden party on the afternoon of the first day; to the Local Committee and Transportation Committee, special reference being made to Drs. C. F. Martin and J. Alex. Hutchison, for their indefatigable efforts for the success of the meeting; to the Treasurer, the President, and the profession generally for their hospitality. Thus was closed the greatest meeting in the thirty-five years of the Association, and it is to be hoped that the profession throughout Canada will still further take an active interest in the national organization.

ANNUAL MEETING OF THE ASSOCIATION OF MEDICAL HEALTH OFFICERS OF ONTARIO.

The Seventeenth Annual Meeting of the above Association, which was held in Berlin, September 9, 10, was successful in point of attendance, forty-four members having registered. Dr. Kitchen presided at all the sessions very acceptably. We subjoin a list of the papers read: The Public Water Supply of Berlin, Herbert J. Bowman, C.E., Berlin; Report of Special Committee on Vaccination, Prof. W. T. Connell, M.D., Kingston; Bearing of the Complications of Bovine Vaccination upon its Unqualified Acceptance by the Profession and Public, J. J. Cassidy, M.D., member of the Provincial Board of Health, Toronto; Control of Smallpox Outbreaks in Cities, R. Law, M.D., Medical Health Officer, Ottawa; Fowl Diphtheria—Is it Contagious to Man? Prof. F. C. Harrison, Agricultural College, Guelph; Control of Outbreaks of Diphtheria, J. S. Wardlaw, Medical Health Officer, Galt; Historical Illustrations of Variations in Type of Communic-

able Disease, C. A. Hodgetts, M.D., Medical Inspector Provincial Board of Health, Toronto; The President's Annual Address, E. E. Kitchen, M.D., Member Provincial Board of Health, St. George; Social Phase of Hospitals and Sanatoria for Consumptives, William Buckingham, Chairman Hospital Board, Stratford; The Ethical Value of Education in Preventive Medicine, P. H. Bryce, M.D., Secretary Provincial Board of Health, Toronto; Sewage Disposal, J. A. Amyot, M.D., Bacteriologist Provincial Board of Health, Toronto; Results of Recent Experiments on Treatment of Excreta with Moss Litter, Thos. Macfarlane, Chief Analyst Inland Revenue Department, Ottawa; Practical Scope and Operation of the Factory Act, J. Y. Burke, Provincial Inspector, Toronto; The Duties of a Medical Health Officer, G. H. Bowlby, M.D., Medical Health Officer, Berlin.

The members of the Association were entertained at a very enjoyable informal concert in Concordia Hall on the evening of September 9. There was also an excursion by trolley to Waterloo, Bridgeport and the Sugar Refinery.

The officers for the ensuing year are as follows: President, Thomas Macfarlane, Esq., Ottawa; Vice-President, G. H. Bowlby, M.D., Berlin; Secretary-Treasurer, P. H. Bryce, M.D., Toronto; Executive Council, Dr. M. J. Arnott, Berlin; Dr. R. Law, Ottawa; Dr. Lane, Mallorytown; Dr. Langrill, Hamilton; H. J. Bowman, Esq., Berlin.

It was suggested that Peterboro should be the meeting-place for 1903, but the selection was left to the Executive Council.

THE first polo match in Eastern Canada was played in Montreal on September 6th between the club team of that city and the team from the Toronto Hunt Polo Club. The Toronto team consisted of Dr. Campbell Meyers (captain), Major Williams, Capt. Elmsley and Mr. Ewart Osborne, with Mr. Alfred Beardmore as umpire. The game was fast and well contested, but, as the score, seven goals to nothing, shows, the Toronto team was at no time in danger of defeat. The Montreal ponies were, on the whole, of finer quality than those of the visiting players but were not as handy and well broken to the game. The return match was played on the new polo field at the Toronto Hunt Club on Wednesday, September 24th, resulting in another magnificent victory for the Toronto team by 10 to 2. We exceedingly regret the accident which Captain Campbell Meyers sustained during the match resulting in a fractured clavicle, but feel glad that he is progressing favorably and will be around very soon again. The Toronto Hunt polo grounds will compare favorably with any on the continent, being very beautifully situated on the banks of the lake. A gymkhana will be held later on the same grounds.

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. XII.

TORONTO, OCTOBER, 1902.

NO. 4.

Editorials.

THE COMPLICATIONS OF VACCINATION.

OCCASIONALLY, even when vaccination is carefully performed, one or more additional vesicles are formed at a little distance from the point of inoculation, and, rarely, there is a general vesicular eruption, due to absorption of the lymph. An erythematous rash is also not uncommonly observed after vaccination and appears, if at all, about the sixth day. Erysipelas occurs as a rare complication. Its appearance in a case would indicate that the vaccine used was infected with the streptococci of erysipelas and phleg-

mon. Dr. Gustave Futterer, professor of physical diagnosis in the Chicago Polyclinic, stated in the *Journal of the American Medical Association*, that about 13 per cent. of the vaccine points of commerce were infected with the streptococci of erysipelas, while about 73 per cent. revealed the presence of such organisms as the streptococcus aureus. An ulcer may form which may be weeks in healing. In scrofulous children the ulcer sometimes persists for two or three months. Eczema and other skin affections are usually aggravated during the course of vaccination.

It is even possible for syphilis to be acquired by vaccination; but this complication has been effectually barred out by the general adoption of non-humanized virus. In view of the danger of causing septic infection by the use of impure vaccine, strenuous efforts have been made by the owners of vaccine farms in America to obtain an article which will convey nothing but vaccinia. To accomplish this purpose, in addition to securing great cleanliness in all the appointments and fittings of their stables, the vaccinifers are kept in a very clean condition, while the stablemen, the members of the staff who inoculate the animals, those who collect the lymph, and also those who put it up for distribution are obliged to use aseptic precautions throughout their work. Glycerinated calf lymph has also been employed. The latter product has, however, been abandoned by many practitioners, because, as Dr. McWeir stated in the *British Medical Journal*: (1) The percentage of failures was very high; (2) very bad arms resulted; (3) a diffused papular eruption was very common. The *Sanitary Review* (England) of March, 1901, said: "Laboratory workers have come to the conclusion that it is, at present, impracticable to produce a sterile vaccine. The results of the use of this so-called 'germ free lymph' have not been to secure freedom from the inflammatory complications of vaccination. On the contrary, it is the general testimony, given by those who have experimented at length with such lymph, that inflammatory reactions occur in about the same proportion of cases as before the lymph was introduced."

The following is from an editorial in the London *Lancet*, January 7, 1899: "Up to the present, of glycerinated lymphs derived from eleven or twelve sources, it is found in one instance only was the lymph really good. . . . One sample of lymph

was exceedingly bad, another brand was good on one occasion and bad on another; and another which was fairly good on one occasion was bad when examined a second time."

Tetanus is not a frequent complication of vaccination, a total of ninety-five cases being collected in the literature of medicine from 1854 up to the present date.

Dr. Joseph MacFarland, professor of pathology and bacteriology in the Medico-Chirurgical College, of Philadelphia, thinks that the recent American and Canadian cases of tetanus were due to the use of various vaccine viruses, though an overwhelming proportion occurred after the use of a certain virus, denominated in his report as "E." He thinks that the tetanus organism is in the virus in small numbers, being derived from the manure and hay. He thinks that the future avoidance of vaccinal tetanus is to be sought for in the preparation of the vaccine virus. He expresses the opinion that the bacillus of tetanus does not enter the wound subsequent to vaccination, but that having been implanted with the virus its development is delayed until other conditions favorable to it arise, in consequence of the vaccination lesion itself.

No matter whether humanized or bovine lymph be used in vaccination, an erythema may develop or an eczema be started. Anders thinks that the germ of erysipelas will not be inoculated with humanized lymph unless the disease happens to be prevalent in the house. Should such be the case vaccination ought not, as a rule, to be performed; if deemed necessary, great care should be taken to ensure cleanliness.

While it is true that syphilis may be inoculated with humanized lymph, such an accident could only occur through carelessness, and, in any case, the responsibility for the act could be made to rest on the vaccinator, who ought to know the source of the vaccine he uses. If the vaccine lymph is taken from a characteristic vaccine vesicle (from the fifth to the seventh day of its development) of a healthy child, and applied directly to the arm of another, no danger of inoculating syphilis need be feared. Humanized virus may be dried and preserved for use as in the case of bovine virus.

Should a vaccinated person be inoculated with the germ of tetanus through the use of improperly prepared vaccine, the responsibility for the crime unfortunately rests with no indi-

vidual, although a grave injury has been perpetrated and medical science is seriously compromised.

It is absurd for editors of medical journals and members of health boards to urge the necessity of general vaccination, if the practitioner is advised to use vaccine, which may produce tetanus. Whatever material other than vaccinia may be present in a sample of vaccine, and it is confessedly difficult to exclude undesirable pathogenic germs, the organism of tetanus should be barred out. In saying this we do not wish to throw any discredit on the vaccine farms of America and Canada, many of which have been established at great expense, and most of which are carried on according to the methods most approved of by medical experts.

It is to be hoped that we have heard the last of vaccinal tetanus in America and Canada. Should its presence be noted again, many practitioners will feel constrained to demand governmental supervision of the vaccine output or else will escape from the dilemma by resorting to the use of humanized lymph. J. J. C.

THE SPOROZOON OF SMALLPOX.

IN *La Presse Medicale*, August 6th, 1902, Dr. A. Clerc writes interestingly of the sporozoon of smallpox, his article containing among other valuable information, an abstract of a recent paper by Ishigami, of Osaka, entitled "Ueber die Kultur des vaccine-resp. Variolacreggers," which was published in *Centralblatt fur Bakterrologie*, 1902, Bd. XXXI. No. 15. We have translated this portion of Dr. Clerc's article and herewith present it to our readers.

"The recent researches of Ishigami, of Osaka, made in Kitasato's laboratory, give precision to the facts acquired by his predecessors and superadd a datum of capital importance, the cultivation of the parasite in a special medium.

Ishigami, who declares that he has studied this question since 1893, divides his paper into several chapters.

The first is devoted to the means of investigation. He says: "If you wish to seek for the parasite in the tissues, you inoculate a heifer and each day you cut out from the scarified spot a fragment of the animal's skin, which you split into layers. You may also use vaccinal lymph, smallpox lymph or dried crusts, but in

any case the material employed for the investigation should be steeped in a solution containing carbolic acid to prevent the ulterior development of bacteria. Heat is the best means of fixing dry preparations, ferric hematoxylin is the best nuclear colorizer; eosin, fuchsin, thionin, methylene-blue color parasitic cysts in a most intense manner.

In the second chapter Ishigami describes minutely the lesions developed at the point of inoculation. Numerous ameboid corpuscles may be observed, which penetrate into the epithelial cells, in which they can multiply; the epithelial cell swells, then disappears, at the same time a common envelope forms and the parasitic cyst is constituted. The ameboid bodies are found in the blood and the organs of the body, but they are then extracellular.

The third chapter contains a very precise description of the parasitic agent. It may be described under three forms. As an ameboid form it appears like a small round body ($2.5\ \mu$), brilliant, of a greenish tint, without an enveloping membrane or nucleus and capable of exhibiting, when placed on heated platinum, movements of translation peculiar to itself. In the succeeding stage it acquires a colorable nucleus and protoplasm, separable into an endo and an ectoplasm, after which its contents become granular and one may observe the development of a cyst. These cysts (15 to $20\ \mu$), generally of an oval form, contain from twenty to forty small corpuscles, which represent sporozoites. These different stages do not necessarily succeed each other, and the sporozoon may either divide itself directly or, on the other hand, become encysted. In the latter case its nucleus first divides, then afterwards its protoplasm and the sporozoites are formed. Ishigami has been unable to form positive conclusions as to the presence of spores properly so called.

The fourth chapter is the most important, because it contains details relating to the culture of the parasite. Unfortunately these details are lacking in completeness, owing to their brevity, for the author does not give the composition of his culture medium. He simply states that it is a liquid into the elements of which healthy epithelial cells enter. Fresh vaccine is sowed in such a liquid, free from bacteria, and it is placed in an oven at a temperature of $100\ 2.5\ ^\circ\text{F}$. The sporozoon develops with characteristics almost identical with those previously described. However,

its multiplication is less rapid in the tissues and it takes from five to nine days to reach the cystic period.

Not content with cultivating the parasite, Ishigami has injected its cultures into heifers and he has shown that pustules appear on them, followed by complete immunization to any ulterior vaccination. The contents of the pustules injected into other animals 'cause the same lesions and the same immunization. Besides, a microscopic examination of the tissues has enabled him to discover the same protozoa. Other experiments have revealed an extremely important fact. Ishigami has caused the appearance of immunizing pustules by the injection of variolous cultures; but the contents of those pustules injected into man have not exhibited the same virulence. Variolous virus is therefore attenuated after having passed through the organism of the heifer. Hence vaccinia can be only an attenuated variola.

For more details Dr. Clere refers the reader to the original article in which the slightest morphological particulars will be found completely discussed. Dr. Clere thinks that Ishigami cannot be accused of any lack of clearness or precision, but considers it regrettable, however, that he has not revealed the exact composition of his culture medium. He has thus suppressed all means of testing the accuracy of his experiments, and experimental researches have no definite value unless when they can be verified. Dr. Clere continues: "An analysis of recent papers on the parasite of variola shows a remarkable unanimity among authors as to the nature of the pathogenic agent. It is a sporozoon, which, by its characteristics, is related to the *microsporidium bombycis* (Ishigami). One may observe the same concordance in what relates to the identification of vaccine and variola, so long discussed, which has been admitted by Jenner, Pfeiffer, Eternod and Haccius and denied by Chauveau. Ishigami appears to have demonstrated that human variola, after its passage through animals of the bovine species, loses its old-time virulence for man."

Dr. Clere concludes: "Without wishing to take either side on this last question, one cannot avoid being struck by the positive orientation of the subject given by authors working independently of each other, and it appears permissible to hope that their opinion may soon become that of the majority of scientists and that bacteriologists will finally obtain variolous cultures of an undeniable morphology and of a specific character."

J. J. C.

SOME OF THE ADVANTAGES OF VACCINATION.

PHYSICIANS who have not seen cases of smallpox, and nowadays there are many such, are not in a position to appreciate the horrors of that disease. The only real method of estimating the ravages of smallpox is to see an ordinary case of it which has not been modified by previous vaccination. The swollen head and unrecognizable features of the sufferer enable an observer to form a truer idea of the case than the diligent reading of literature, even of the illustrated variety. But your confirmed anti-vaccinationist, even if he were privileged to see such a case, a glass partition separating him from the patient, would still ejaculate: "Yet, why vaccinate? Can you not depend upon isolation, cleaning up, and disinfection—measures that, when thoroughly enforced, have robbed all epidemics of their terrors, not excepting Asiatic cholera, yellow fever, and bubonic plague?"

His interlocutor, a patron of vaccination, might reply: It is not denied that the preventives you mention are potent and that they help to limit the spread of smallpox. As practised, even in civilized lands, they are inefficient, while in barbarous or semi-civilized lands they are not employed at all, or else in a half-hearted way. In the homes of the poorer classes in Canada, and even in those of the higher, absolute isolation cannot be carried out successfully, and, in view of this fact, special, well-equipped hospitals must be provided for the reception of the disease. This necessity makes the management of a smallpox epidemic expensive. The expense is increased by the fact that without a general enforcement of cleaning up and disinfection the spread of smallpox cannot be prevented. Even if all these measures are enforced fresh cases of smallpox will crop up, because, prior to the discovery of smallpox in his person, a smallpox patient may, by contact or proximity, convey the poison with resulting variola in the person thus exposed. The distance to which the contagion may be carried through the air is considerable, and all authors are agreed that it is one of the most infective diseases with which we are acquainted. Besides, it is contagious from the earliest active stage to the end of convalescence, and, according to some observers, even during the stage of incubation. The avenue of entrance for the poison into the system is not known; but it is

most probably the respiratory tract, the poison being inhaled and thence taken into the general circulation. The poison also adheres to clothes, body, or bed linen, etc., and retains its pathogenic power for a long time. Its vitality is retained after death and the room, which may have been occupied by a patient, the bedding and articles of furniture, all serve to convey the disease. Isolation is applicable to recognized cases of smallpox, but is powerless against smallpox patients in the earlier stages, who may light up infection in exposed persons, by contact or by the transmission of formites before the true nature of their complaint is discovered. Cleaning-up and disinfection may not be employed until the mischief is done.

The best all-round means of preventing smallpox is to render every person insusceptible to the infection of that disease, which can be accomplished by vaccination.

An instructive method of convincing oneself of the value of vaccination is to observe the immunity of nurses and physicians in smallpox hospitals, who could not escape the infection were they not protected by vaccination or revaccination. On this subject a writer in the *Sanitary Record* (England) said recently: "During the past seven years 630 cases of smallpox have been admitted in the Liverpool Smallpox Hospital. During that time 434 persons have been variously employed in this hospital in different capacities; six of them had had smallpox before joining; of the remaining 428 of this large staff two contracted smallpox, and these two were ward-maids who had entered the wards before vaccination. One hundred students and doctors attended these patients and none caught the disease; all of them had been revaccinated. . . . We do not get this immunity in the fever wards, for twenty-six members of the staff in the Fever Hospital took these diseases."

Many other equally convincing statistics and observations taken from the military, naval and civil service reports of different countries could be given, if necessary, to show the uniform behavior of vaccination and revaccination in protecting exposed persons from smallpox. It is well, however, that examples such as the one we have quoted should be related from time to time, for the anti-vaccinationist is abroad in the land. If the ordinary citizen will but listen while there is yet time he may obtain, with but a trifling inconvenience, protection against smallpox, by means of

vaccination, rather than run the risk of getting as much, through the effective but highly perilous teaching of smallpox itself.

J. J. C.

THE MEETING OF THE CANADIAN MEDICAL ASSOCIATION AT MONTREAL

JUDGING by the attendance at the Annual Meeting of the Canadian Medical Association this year, an indelible mark as a reminder around the dates September 16, 17 and 18 must have adorned the calendar of a goodly number of our medical practitioners. The actual number present exceeded that of any former year, the members registering totaling about 325, a source of thanksgiving and pleasure, no doubt, to the Treasurer, Dr. Small. The improvement is slow but sure, and we hope, ere many years pass, to be able to place on record double the number, for 325 seems but a poor expression of the loyalty of our men to their united best interests as represented in the Canadian Medical Association. A little more manifested enthusiasm and a general understanding that our convening means first a few hours for Jack to work and then a time for Jack to play, and surely, from town, city and country physicians would gladly make a yearly pilgrimage and so as a unit pay tribute at the shrine of Aesculapius.

Montreal has ever been deemed an ideal convention city. The largeness of its widespread commercial interests, its fine university buildings, its surroundings, show places, and its burned-out volcano, and last and best, the kind hospitality of its citizens, and at our recent meeting the thoughtful opening of their homes and the many invitations "to take turkey with them" of the resident physicians make even the oft-voiced thanks of those attending the 1902 Association seem utterly inadequate to express their feeling of appreciation for the delightfully courteous way in which Montreal extended its welcome. The city seemed "teeming" with conventions and every second man one met was labelled by a badge bearing one or another device. The Windsor Hotel might fittingly have hung out the sign "breathing room only," and at the Place de Viger the dentists were fighting it out for standing room, and all other hotels were packed from deck to topmast. The arrangements made as to the use of the different lecture rooms of the Medical Department of McGill University by the Associa-

tion were very complete. The exhibits of surgical instruments, pharmaceutical preparations, etc., were arranged attractively and the ample space at the disposal of the exhibitors made possible the gaining of artistic effects. The local committee must have worked very hard to make the meeting such a success. The President's address, the evening of the first day, was very much to the point, and Dr. Shepherd received a warm reception. The Address in Medicine by our esteemed fellow-countryman, Dr. William Osler, of Johns Hopkins University, Baltimore, was indeed a masterpiece and added (if such a thing were possible) to his already well earned and enviable reputation as a scientist. The list of papers was exceedingly comprehensive. Among the contributors (outside of Canada) were Dr. A. R. Robinson, of New York, and Dr. Paton, of Baltimore.

A report of the meeting by Dr. George Elliott will be found in this number which will prove of interest to those unable to attend. A *conversazione* at the Art Gallery, "A Smoker," A luncheon at Victoria Bridge and run down the Rapids, and a very largely attended Garden Party at the beautiful residence of Mr. and Mrs. James Ross, with a glimpse at their few but rarely beautiful pictures, were some of the many ways in which the short hours were quickly passed. We congratulate Dr. Moorehouse, of London, upon his election as President for next year, and hope all those who have pleasant memories of the good time the Association spent at the Forest City a few years ago will be present next year, and as the old-fashioned camp-meeting evangelists in the South used to say, "let every one coming bring two sinners right along with him."

W. A. Y.

EDITORIAL NOTES.

Psoriasis and Vaccination.—Weinstein (*Wien. med. Woch.*, January 25th, 1902) points to the rarity of the occurrence of psoriasis on vaccination cicatrices and the still greater rarity of the eruption first beginning in that situation. A soldier, aged 22, was vaccinated with calf lymph in two places on the left arm, about the middle of October, 1900. The vaccinia pustules were succeeded by red sears. Early in February, 1901, they became covered with white scales, which became more and more marked,

until they presented all the characters of psoriasis. For a month the two sears were the only parts affected, but the disease then spread to the left elbow, and from thence to other parts of the body. Weinstein has collected twenty-four cases in which psoriasis appeared at varying intervals after vaccination. In most of these the patients were healthy, and no history of previous attacks of psoriasis was obtained. Most authorities deny the possibility of psoriasis being inoculated by vaccination, especially if calf lymph be used. Psoriasis is unknown in calves. Vaccination probably acts, therefore, as a simple injury, for the occurrence of traumatic psoriasis, after the application of iodine, cantharides and other chemical irritants, after thermic stimuli—cold or heat—and after a variety of mechanical lesions is well known. The regions which are typically affected, the elbows and tuberosities of the tibia, are exceedingly exposed and liable to injury. Psoriasis also picks out parts habitually exposed to pressure, such as the waist in women, the apex of a scoliotic curvature or the skin beneath tight garters. It has been known to follow the operation of tattooing, the bite of a horse, and excoriations due to riding.

The Buffalo as a Vaccinifer.—Having failed to get good lymph from heifers in the Far East, Calmette in 1892 vaccinated buffalo calves and obtained fine pustules, the lymph from which, when inoculated in man, produced successful results in 100 per cent. of the cases. Since that time the buffalo calf has been regularly used as a vaccinifer in the French colonies of Indo-China. The French vaccine institute at Saigon has developed very much and is considered to-day the finest of that kind in the East. Dr. Simond' states that in 1898, 327 buffalo calves were inoculated there, producing lymph enough for 1,300,000 vaccinations. The French article has also been exported to the English and Dutch colonies, to Siam, the Philippine Islands, and to the coast of China. Buffalo vaccine is said to be very active. It has even produced generalized vaccination in some children; besides it offers a stronger resistance to high temperatures than calf lymph.

J. J. C.

No Longer an Antivac.—The following excerpt from the Indiana State Board of Health report is instructive and will bear repetition: "Mr. W. D. Radcliff, of Algiers, Pike County,

has had experience lately with smallpox and, while he once did not believe in vaccination, now he sees and believes. In a letter dated at Algiers, Indiana, he says: 'I have just recovered from an attack of smallpox which was very severe and which kept me from business twenty-two days. I said that I would rather have smallpox than be vaccinated: I got my wish. However, when I went down I permitted the doctor to vaccinate my wife, two children and the hired girl. All vaccinations took except on my oldest daughter. We waited a week and vaccinated her again, but it was too late, she had already taken smallpox; but the vaccination worked and she had smallpox very lightly. My wife and other child, and also the hired girl, lived in the house with us two smallpox patients, came in daily contact with us and went scot free. I now believe in vaccination, and I advise others not to be foolish as I was and prefer smallpox to vaccination.' "

Extreme Virulence of Smallpox in French Indo-China.—It has been proved that, among adult natives in Indo-China, smallpox as well as vaccination confer but a feeble and brief immunity, as can be proved by fresh attacks of smallpox and successful vaccinations. This phenomenon explains why during an epidemic of smallpox when the virulence of the poison is intensified, all the native inhabitants, young and old, whether they have had the disease before or not, become the prey of smallpox, so that the whole population of a region may be almost entirely swept away. The confluent form destroys the greatest number, and the hemorrhagic variety is not uncommon. Many who do not die of the disease are mutilated—large, retractile or keloid cicatrices, chronic suppurative adenites, arthrites followed by ankylosis, amyotrophies, and chronic nephrites are sequelæ which render life a burden to the unhappy survivors. The most formidable of all the sequelæ of smallpox is blindness. The blind are quite numerous in Indo-China, and their condition is largely due to smallpox.

To Regulate the Sale of Vaccine Virus, Antitoxines, etc.—We notice in the *New York Medical Journal*, July 12, 1902, that the United States Senate on June 30th enacted a measure to regulate the sale of viruses, serums, antitoxines and analagous products in the District of Columbia, and to regulate interstate traffic therein. We should be pleased to see similar legislation

introduced into Canada under the auspices of the Public Health Department, Ottawa.

Inoculation Practiced in French Indo-China.—The practice of inoculating people with variola prevails in French Indo-China, and serves to maintain smallpox in an epidemic condition in that country. A Chinese physician scarifies the child's arm with the point of a knife which has been smeared with variolous matter; taken from a selected patient. Large pustules are produced which leave scars as big as a 20 cent silver piece. The natives pay 50 cents for each inoculation.

ITEMS OF INTEREST.

International Congress of Gynecology and Obstetrics.—Two professors of Laval University, Montreal, Drs. L. N. Delorme and M. T. Brennan, are attending the Fourth International Congress on Gynecology and Obstetrics at Rome, Italy. Five American physicians are also present.

Death of Dr. Price.—The death of Dr. Nelson Price, of St. John, N.B., is announced, at the early age of twenty-eight years. Dr. Price had gone to South Africa with the hospital corps of the Canadian Mounted Rifles, but contracted typhoid fever shortly after his arrival, of which he has since died.

Equine Eddyism.—The latest reported victory of Eddyism over disease is reported to be the wonderful restoration to health and activity of a noted racing stallion, scheduled to race next week. Commenting on this, one trainer sagely remarked: "It's better to nerve the beast than give him a drop of rye."

Calgary for Consumptives.—Dr. James Stewart, Professor of Medicine at McGill University, Montreal, who has returned from an extended tour of the Canadian North-West, was much impressed with the climate around Calgary, and considers that the neighborhood of Calgary offers exceptional advantages for a consumptive sanatorium.

A Magnificent Donation.—Lord Strathcona and Lord Mount Stephen's joint prince gift of \$80,000 yearly to London hospitals, excites enthusiasm and admiration, and is the subject of editorials from most of the journals, with romances of the success afforded by

the lives of the donors. The fact that both made Canada the land of their adoption is taken to emphasize Canada's practical loyalty and affection for the Mother Country. The gift, they say, proves of the highest service for advancement in the healing science.

Honors to the Memory of Pasteur.—A fine portrait statue of Pasteur has been erected at Dôle, his birthplace, and a committee has been appointed to raise funds to purchase the house in which he was born, as a permanent memorial. Besançon has also recently dedicated a bust of Pasteur as a memorial of the three years he spent there as pupil and then teacher in the lycee.

British Columbia Medical Association.—The third annual meeting was held at Vancouver, August 29th and 30th, under the presidency of Dr. R. F. Walker, of New Westminster. Dr. J. M. Pearson, Vancouver, acted as Secretary. Dr. E. C. Dudley, of Chicago, contributed a paper on gynecology. The Association will extend an invitation to the Canadian Medical Association to meet at Vancouver in 1904.

A New Bellevue Hospital Demanded.—The recent report of the trustees of Bellevue Hospital, New York, makes public what has long been only too familiar to the medical profession in that city, namely, that despite all that has been and can be done toward improving the present ramshackle building, now known as Bellevue Hospital, it will remain unsanitary and wholly unsuitable for carrying on its great work. As the work of the hospital cannot be interrupted, the new buildings must be erected in sections, and the mayor is urged to take the first steps at once.

Pautauberg's Solution (Hydrochlorophosphate of Lime and Creasote).—This combination of creasote with phosphate of lime and hypochloric has been proposed for the treatment of bronchial catarrh and pulmonary tuberculosis, and instances are cited in which while creasote could not be tolerated or else did little good this form gave favorable results. Pautauberg's solution is of the color of a dilute solution of perchlorate of iron with a marked taste and odor of creasote. On the addition of an alkali such as ammonium hydrate the calcium phosphate is precipitated. Good results in various affections of the respiratory organs are recorded in French clinics. The preparation is a decided pharmaceutical success in presenting creasote in a far less objectionable form than is commonly the case, and its association with tonics is another important advantage.—*Lancet*, July, 1902.

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF
MEDICINE AND SURGERY

VOL. XII. TORONTO, NOVEMBER, 1902.

NO. 5.

Original Contributions.

VIRCHOW.*

BY J. J. MACKENZIE, B.A., M.B.,

Professor of Pathology and Bacteriology University of Toronto.

HE who is chosen by his colleagues to deliver the opening lecture of the session is apt to view the situation with mixed feelings. At first with pride at being so selected, but as time passes, with growing uneasiness and doubt as to his ability to carry out the task assigned; and he ultimately reaches a point at which he wonders whether they wished to spoil his holidays or only hoped to make their own more pleasant. It is not an easy task to choose a subject for an opening lecture. There is an *embarras des riches* which makes selection difficult. Medicine, with its fascinating past, linked at every point with the history of the development of human knowledge, and its glorious future so full of promise for the human race, is not wanting in many and varied themes for such a lecture.

The lecturer is peculiarly fortunate when the date of his address falls with an epoch in the history of the institution; and in that fortunate position I find myself to-night.

Since the opening of the Biological Department of the University in 1890, each succeeding autumn has seen this theatre filled with ever-increasing crowds of students, gathered upon the first day of the session, to hear the opening lecture. And since that date, the Biological Department has filled a peculiar place in the history of the Medical Faculty and of its students. Here the students begin their work and within its walls the Faculty meets each month during the session.

* An address delivered at the opening of the sixteenth Session of the Medical Faculty of the University of Toronto.

To-day forms an epoch in the history of this institution in that this is probably the last opening lecture of the Medical Faculty to be delivered in this hall. Before the session is finished, we will have moved into the building which is now being erected to the north of this one and by transferring the work of the third and fourth years to it, the last step will have been taken to bring the whole body of medical students thoroughly in touch with University life. It is a step to which the friends of the Faculty and the University have long looked forward; for, although the University has no more loyal alumni than those in medicine, yet the separation of the final years has, to a certain extent, tended to cut them off from the University and its life, and has certainly tended to produce a separation between the men of the first and second and those of the third and fourth years.

At the very outset the founders of the Medical Faculty committed themselves to the position that the study of medicine required a thorough general scientific groundwork, especially in biology, and the erection of this building in 1890 was the first step towards properly providing for this; although for the three years prior to that date good work was done even with the insufficient equipment and cramped accommodation then available. It is peculiarly fitting, therefore, that the biological building should be closely associated with the development of the Faculty.

The effect of this care for the groundwork of medicine by the University authorities, is shown in the standing which its graduates have taken wherever they have gone; and the University herself has profited not only on the prosaic side of increased fees but also on the much more important one of a rapidly-growing body of loyal graduates, scattered from one end of the province to the other—graduates as loyal and perhaps more influential than any other body of her alumni.

For still another reason, it is fitting that the opening lecture in the Faculty of Medicine should be delivered in this building, because the fact that should be deeply impressed on you students who are entering for the first time the study of medicine, and upon you older men who have been engaged in it for a longer period, is that at bottom Medicine is a biological science, and that so long as during your student days or in later life in active practice, you pursue a biological method, in the study of the problems which you may have to face, so long will you be pursuing the study of scientific medicine; but when you drift away from that method, you are drifting towards a false empiricism and quackery. And perhaps, when now the Faculty of Medicine is to a certain extent passing from under the protecting wings of the Biological Department, it may be permitted to refer to one, who more than any other member of the University has directed the development of medical teaching in this country along true biological lines. I refer to the

Vice-President, Professor Ramsay Wright, and I believe that all members of the Faculty will agree with me when I say, that we owe him a very great debt, for the influence which his teaching has exerted upon the breadth of outlook which our students have developed. The students of to-day will hardly realize that the point which was most severely attacked by the enemies of the University Medical Faculty in 1887 was the introduction of general biology in the course and the prominence given to that subject; and now, when entering the sixteenth session, that we may look upon that subject and its influence upon the rest of the curriculum as one of the glories of the Faculty, we must acknowledge that this is owing to the catholicity of spirit of the head of that department.

It is not my intention, however, to address you to-night on the necessity of a proper biological training as a foundation for medicine; that has been done by other and abler hands than mine; and although it is ever an interesting subject to discuss, the fact is now everywhere admitted and needs no discussion.

To-day, another epoch in the history of medicine has been reached, an epoch which we must all regard with sadness, although it is an epoch which we have all known must soon come. We are to-day, students of Modern Medicine, mourning the father of Modern Medicine, Virchow. Virchow is dead, and with his passing is broken the last link between scientific medicine, which he did so much to establish, and of those older ideas of the first half of the nineteenth century, which he did so much to overthrow. For over fifty years Virchow's mind has dominated our science, and for all time his influence will be felt; it is fitting that on such an occasion we should devote more than a passing notice to the life and work of our great master. I wish this evening, therefore, for a short time to direct your attention to the life of Virchow, and to attempt in some measure to give you an idea of what his life work has meant for Medicine and what a loss Medicine suffers by his death.

In order to properly appreciate his influence, we must first consider, for a moment, the condition in which he found the science when he graduated from the University of Berlin in 1843.

During the first forty years of the nineteenth century great advances have been made, especially in gross anatomy, both normal and pathological; in England the teaching of Hunter had done much to emancipate medicine from the errors of the eighteenth century; in France great progress had been made under Bichat, Laennec, Andral, and Cruveilhier; while in Austria, Rokitsansky, one of the greatest, perhaps the greatest, gross pathologist of all time had added immensely to the accurate knowledge of the gross appearance of disease as seen in the autopsy room; but everywhere we find that the mysticism of the eighteenth century dominated ideas, and metaphysical speculations still took the place of careful

observation and experiment. In fact, the history of medicine during the first fifty years of the past century was still the history of the rise and fall of systems and schools. So little did scientific methods affect the interpretation of the phenomena of disease, that Rokitansky, himself the most painstaking and exact of gross pathologists, was the father of that system which was the first to be attacked and overthrown by Virchow, namely, the humoral pathology. It would indeed take too much time to attempt to fully describe the state of medical thought at this period; it would perhaps be difficult for us to appreciate it properly; we have gone so far forward that to-day it is almost impossible for us to go back to the point of view of the physician of 1840, and appreciate the arguments which appeared to him so cogent. The tendencies were all transcendental; there was continually introduced into the arguments the action of a something which might be called the "nervous principle," the "life principle," or the "formative principle," or something else of the kind, to which all sorts of activities were ascribed; indeed Virchow, in the first volume of his *Archiv*, quaintly scoffs at the powers of this formative principle, as described in Lobstein's Pathological Anatomy, in the following words: "Does it not seem as if this *Bildungskraft* were a free burgher from 'the bloody land of Kentucky, half horse and half alligator,' or a small demon from the days of the Rosierneians."

In Germany the system which perhaps had the strongest hold on the medical mind was that form of humoral pathology which had been promulgated by Rokitansky, a modification of the pathological views of Andral, the French pathologist. According to this view, the primary seat of all disease was in the blood and, as Rokitansky thought, disease consisted in false mixture of the elements of the blood, chiefly the fibrin and the albumen; to designate this abnormal condition he made use of the old Hippocratic term *crasis*, and classified all diseases into various *crases*. One of his most important *crasis*, for instance, was that in which he conceived there was an excess of albumen and a deficiency of fibrin; here he placed such widely different diseases as gout, rachitis, typhoid, acute tuberculosis, Bright's disease, cancer, and others equally varied. How strong a hold the humoral pathology had on the minds of men is shown by many terms still used and believed in at the present day, by the laity, such as pure and impure blood, and even the terms hot blood and cold blood; and although no one will gainsay the therapeutic value of brimstone and molasses, yet doubtless, in the minds of the common people, the humoral pathology is responsible for the vigor of its application.

The grave objection to these views and to others of the same period was that they were almost entirely speculative hypotheses, with but the slenderest foundation in the way of observed fact or experiment.

These were the doctrines and theories of disease which Virchow was taught when a student in Berlin, and we doubt not that throughout those years he must have struggled vigorously against them.

We have very few details about his early years of life and study; born in Schivelbein in 1821, a little village in the flat, sandy plains of Pomerania, about forty miles from the Baltic, he attended the village school and afterwards the gymnasium at Cöslin. In an anecdote by his friend Schliemann, we see that even at the gymnasium his future originality of mind was foreshadowed in his attitude towards the study of languages, in which he was very proficient: in his home, he had begun to study the classics, under an enlightened teacher, who did not think it necessary that he should memorize grammatical rules, so long as he could translate correctly and write correct exercises; on going to the gymnasium he was under a Greek master who thought that since he could not repeat the rules in Buttman's grammar his expertness must be due to deceit, and so positive was he of this that he opposed him in his final examination as not possessing sufficient maturity of morals to proceed to the University. However, the opposition availed nothing, and he passed to the University in his eighteenth year in 1839.

During his medical education, Virchow so attracted the attention of his teachers that on graduation in 1843, instead of entering the army medical service for which he was preparing, he was retained in Berlin as prosecutor under Froriep at the Charité Hospital; very shortly after this he was made lecturer in pathology. This was in the year 1847, and a few months later in conjunction with his colleague Reinhardt, he began the publication of the *Archiv für pathologische Anatomie und Physiologie und klinische Medizin*, the journal which was to bear the banner of the revolutionary party in medicine. Reinhardt died in 1852, and since that year Virchow has remained sole editor until the day of his death, when the *Archiv* had reached its one hundred and sixty-ninth volume. At first the *Archiv* labored under serious difficulties; the second volume was not complete till 1849, the third not until 1851; from 1852 until 1856 one volume per year was produced, and with the latter year began the regular appearance of two volumes, in 1861 it was again increased to three, and in 1879 to four volumes per annum. The *Archiv* practically represents Virchow's life on the side of pathology; in it we see the gradual development of all those ideas which did so much to clear away the debris of past systems and schools. To the early volumes he contributed enormously; of the fourteen articles in the first volume eight are from his pen, in the next three out of ten, and so on. It was with no uncertain sound that he sketched the needs of Medicine in those early articles, and it was with heavy blows that he

drove home the lessons he had to teach, throughout what might be called the Sturm und Drang period of the *Archiv*.

In his leading article to the fiftieth volume, he indicates what the editors had to face and how they were received; I will quote a portion of it.

"It is difficult at present to realize the boldness with which two young and almost unknown men undertook by the publication of this journal to give a new direction to the science of Medicine. The market was apparently glutted with medical journals, and in Prussia especially a certain number of these bore an entirely official character. These journals appeared under the aegis of high state officials; they received official news, and were subvented in all sorts of ways. It was very far from the minds of the official world of that day to think scientific requirements necessary to ensure the circulation of the periodical press. The editors received so little support, they had so few contributors, and these so weak that they were compelled to print the feeblest and most tedious articles—indeed, articles that had no other merit than that they called the attention of the reader to the writer.

"The one requirement alone that contributions to the medical press should be original (*Arbeiten*) gave rise at that time to great astonishment. This was the day of so-called practical observation. The busy practical physician believed he had satisfied all claims if from time to time he cast a glance backward over his professional career so rich in experiences, and from it produced for the use and comfort of his colleagues and suffering humanity, a general abstract, in which he ordered and explained his co-called facts according to his favorite system. Autopsy reports were almost as great rareties as in the days of Schenk von Gravenberg (fifteenth century). Microscopic investigation there was none; even clinical histories were only written down from memory, or if they were drawn from the daily journal, it was apparent that, apart from the examination of the pulse, it was rarely a question of the systematic examination of the patient. Therapy moved in its old accustomed channels; venesection stood in the first place; the activity of drugs was esteemed as high as their classification into distinct groups was hard and fast; and people were so much the more contented with their successes, since the humoral pathology, believed in and preached by laity and profession alike in most beautiful harmony, easily explained failures and offered convenient excuses.

"It would certainly be interesting to picture the condition of official medicine as it existed scarcely 25 years ago (Virchow writes in 1870) for the instruction and warning of the medicine of the future. What I have said, however, will show that it seemed rather bold to declare war not only on the existing press, but also on the whole official medicine, in order to bring about

what both held to be useless and impossible, namely, the study of pathological physiology. In the minds of the reigning circles, Hartmann's *Theoria Morbi* rendered all that was necessary to the clinician and practitioner for the interpretation of symptoms and of the healing process. More than this was evil; unfruitful learning they called it. And when I published an article in my second volume upon the reform of pathological and therapeutic views through microscopic investigation, when I desired that the whole of medicine should move at least three hundred times closer to natural processes, then I appeared to these gentlemen as an out and out unpractical and possibly even dangerous doctrinaire and adventurer."

It was natural that the earliest researches of Virchow should have been directed towards the study of the cells of the body, since less than ten years earlier Schwann and Schleiden had announced the discovery, the one of the animal, the other of the vegetable cell. It was natural, also, that a mind so critical should at once attempt to test the pathology of the humoralists from this standpoint. We find, therefore, that his early contributions to science are largely upon the microscopic characters of blood, both normal and pathological. From these investigations resulted his papers on pigmentation, in which he demonstrates so clearly the two forms of blood pigment which are produced by hemorrhage into the tissues, a chapter upon minute pathological change so complete as practically to close the subject. At this time also appeared the results of his work on that peculiar disease of the blood, leucemia, a name which he himself suggested. The curious gross appearance of the blood in advanced cases of this disease led to a confusion with purulent conditions, and superficial examinations under the microscope seemed to confirm this view; to Virchow we owe the recognition of it as a disease *sui generis* associated with enlargement of the spleen and other symptoms, and entirely distinct from pyemia with which it had been confused.

From these studies he was naturally led to a study of inflammation of the vessels, the results of such inflammatory changes, the formation of thrombi or clots, and the conditions which governed the clotting of blood in the living body. Indeed, the clotting of the blood in the living body had, by a series of false hypotheses, been brought by Cruveilhier to explain the whole question of inflammation. This French pathologist had noted that the first evidence of the inflammation of the veins consisted in a clotting of the blood; and as in inflammations of the organs, the presence of clots could not be demonstrated in the larger vessels, he introduced the hypothetical condition of capillary phlebitis, that is to say, an inflammation and clotting of the blood in the capillaries. It was to be expected that such a hypothesis, unsupported by facts, would attract Virchow's attention, and in his study of thromboses

he directed special attention to the question of the occurrence of clots in the vessels of the lungs; in studying these, in order to determine whether they had arisen primarily in that situation, he was struck by the fact that when found in the lung there was almost always to be found a similar condition in some other part of the body; and finally he was able to demonstrate that a plug resting in one of the vessels of a lung fitted exactly on to a thrombus in a systemic vein; and, in fact, that this plug had broken away from the thrombus and had been carried by the blood current through the right chambers of the heart into the pulmonary vessels, passing from the larger to the smaller until ultimately it was stopped by plugging a vessel too small for its further progress. This condition of secondary plugging he called "embolism," and the plug of coagulated blood he called an "embolus," the condition of the lung tissue as the result of this cutting off of the local blood supply by the embolus we call an "infarct," or a condition of "infarction." Now, as this formation of infarcts of the lung had been one of the strong arguments of the believers in the theory of capillary phlebitis, the whole groundwork of a false hypothesis was cut away at one blow. But Virchow was not satisfied with the simple observation of conditions as found at autopsy; he followed the question up by experiment, and by introducing foreign bodies such as rubber into the circulation of dogs so as to produce artificial emboli, he was able to more fully explain the condition and effects of embolism; but especially these experiments entitle him to be considered one of the pioneers of that experimental pathology which was to do so much for the advance of our knowledge. Although much valuable work was done subsequently upon the subject of thrombosis and embolism by other men, and especially by Virchow's most celebrated pupil, Cohnheim, yet it is marvellous how complete was this first demonstration of the facts.

It is said that during the revolutionary year of 1848, when no doubt Virchow's democratic ideas were as well known and as vigorously pushed by him as his notions upon embolism, he was making an autopsy upon a patient of Schonlein's, who was supposed to have died of cerebral hemorrhage; upon opening up the brain he demonstrated to the latter an embolus plugging the middle cerebral artery, Schonlein turned away with the remark, "O! You see barricades everywhere."

But Virchow's study of emboli led him still further. Noting that sometimes the embolus gave rise to a local abscess, and that this depended upon the condition of the clot from which it had originated, he gained an insight into the whole question of metastasis, which became immensely important when he came to study the development of malignant tumors; at the same time he got a conception of the condition called infection which had immediate bearing on the disease pyemia or blood poisoning.

His investigations into the subject of inflammations turned his attention to the question of the reaction of ordinary tissue cells, whence there resulted a valuable contribution upon the subject of parenchymatous inflammation, opening up a new standpoint, which was most important in the development of his ideas on cellular pathology. In this piece of work he pointed out that the changes which one sees in the parenchymatous cells, *i.e.*, the swelling and increase in numbers of the cells, were simply indications of an abnormal activity of all or certain of the processes of nutrition which ended in degeneration of the cell. In this research the author's attention was especially directed towards the connective tissues, and there resulted the discovery of the connective tissue cell, and of the cells of the bone and cartilage and the demonstration that the cells were all of the same nature, and that the tissues were related tissues. These observations on connective tissue were of the highest importance for Virchow's own development, because they enabled him to clear his mind from the last remaining taint of the humoralists and to understand properly the whole question of cell formation.

Schwann, the discoverer of the animal cell, had propounded a theory for the explanation of the origin of the cell which was entirely based on humoralistic ideas. This was the theory of the blastema; he conceived that the cell originated by a kind of organic crystallization from a plastic material, which he named the blastema, a fluid in fact; that the particles in this fluid became massed together to form the nucleus, and around this the cell protoplasm was deposited by a process essentially similar to crystallization. This blastema theory of Schwann was, as Virchow himself says, the obstacle over which he stumbled.

Not only Virchow, but most of the other younger investigators of that day, accepted the blastema theory, and were looking for facts to support it, and were endeavoring upon this hypothesis to account for the formation of all the different cells of the body. One of the strongest arguments for this view was the occurrence of certain granular cells in those areas, especially inflammatory, where new cells were being formed; besides these granular cells there were found pigment cells, blood-corpuscle holding cells, and others which were taken to be proofs of the origin of these structures from a granular blastema. Virchow was able to show that these cells had acquired the granular character or had become secondarily loaded with the pigment masses or the blood corpuscles. Especially the correct interpretation of the granular cells, the fact that they were degenerating cells, was of the greatest importance. As he says in an article in the hundredth volume, "These investigations have a very great value for the history of a human error; these granular cells were regarded as individual steps in a developmental series, and they had been carefully and accurately placed

in their correct order; no objection could be raised against the order, only unfortunate chance had willed that the series had been begun at the wrong end, and that what were really cells in course of degeneration were thought to be cells in the course of development. The arrangement was right; the chronology was wrong. The opponents of experimental methods, the anti-vivisectionists, should learn from this what difficulties are presented by purely anatomical investigation; and to what gross and long-persisting fundamental errors they may lead."

These researches upon the development of the cells of the body and especially the study of the connective tissue cell in health and disease, and its embryological history, finally led Virchow to see that, nowhere do cells originate from a formless blastema, but that they always result from the division of previously existing cells, and he finally announced the fundamental truth of the cellular pathology in his famous modification of Harvey's dictum, *Omnis cellula e cellula*. It is difficult indeed to overestimate the far-reaching influence of this doctrine, not only for pathology, but for the whole of biology. With its recognition was swept away the whole system of the humoral pathologists and with it a crowd of other speculative hypotheses, and the investigation of disease was able to proceed upon a rational scientific path. By it was settled, or rather should have been settled, the question of spontaneous generation.

During all these years of work Virchow's position as a University teacher was undergoing considerable change; in 1848 he was sent by the Prussian Government to investigate the outbreak of typhus in Upper Silesia, and on his return he published a report such as few governments have ever received from one of their own officials. After a masterly discussion of the history and course of the disease, with its symptoms, pathological findings, and its treatment, he proceeds to discuss the cause of such an outbreak and the remedies to be used to prevent an recurrence.

And he does not in the slightest mince his words; he shows that the conditions which gave rise to the famine, and following it the fever, were: First, the stupidity of the whole group of Prussian officials in their bureaucratic methods of dealing with what was an alien Polish population, then the heartlessness of both the aristocracy of birth and of money in the treatment of their tenants and their workpeople, and lastly in the attitude of the Roman Catholic hierarchy, which had kept the peasants in the deepest ignorance. His remedy was characteristic, "Democracy, pure and unalloyed." His suggestion that the education of these people should be begun by giving them Polish schools, and that they should not attempt to Germanize them by insisting on German schools, is of interest at the present day, in view of the troubles that the Government of Germany is still having in this very district. His

return from Silesia was just at the time of the revolution of 1848, and he at once threw himself into the midst of the political struggle over the election of delegates to the German National Assembly, for which he was a candidate. His language in his political speeches at this time must have been most uncompromising, and did not tend to conciliate a government still smarting under the lash of his report upon the typhus epidemic. It is said that on one occasion in referring to the question of heredity, he said that he knew of one exalted family in which the grandfather had softening of the brain, the father hardening of the brain, and the son no brains at all. And this was known to be a reference to the royal family of Prussia. It was natural, then, that he should have been very much a *persona non grata* in official circles, and, as a result, his lecturership in the University was taken from him; this, however, caused such an uproar in University circles, and drew such protests not only from his colleagues, but also from all the medical societies, that the government speedily reinstated him, with, however, greatly restricted powers. Conditions were unsatisfactory, so that when he was offered the newly-established chair in Pathology in the University of Wurtzburg he accepted, and in 1849 left Prussia for Wurtzburg. As Professor of Pathology he remained at Wurtzburg until 1856; throughout this period he contributed extensively not only to his own *Archiv*, but also to other journals, and about this time edited a text-book on Special Pathology, and collaborated with Vogel in one on General Pathology, in which appeared in concrete form the elements of those doctrines which were more fully embodied in his Cellular Pathology.

In the year 1856, Virchow was recalled to Berlin to fill the new Chair of Pathology, his recall being practically forced upon the Government by the medical public opinion of the Capital. He returned but only upon conditions, one of which being that there should be erected an institute for practical research. On his return he found the museum of Morbid Anatomy, possessing only about 1,500 specimens; at his eightieth birthday celebration he was able to state that the new museum recently erected by the Prussian Government at a cost of over 500,000 marks, contained over 23,000 specimens: a very pregnant example of his activity along only one line of pathological work.

In the year 1858 appeared his great work upon Cellular Pathology. This was a course of lectures delivered in the early part of the year chiefly to his colleagues and medical men in the city of Berlin, the full title of the work being *Cellular Pathology as based upon Physiological and Pathological Histology*. I have outlined to you already the investigations which led up to the conceptions embodied in this book. Its success was immediate, and it was at once translated into all the European languages.

The position reached in these lectures is broadly this, that the cell is the unit of the body, in health and disease, that disease of an organ is disease of the cells of that organ, disease of the body, disease of the cells of the body; and that those manifestations which we call pathological are simply abnormal manifestations of otherwise normal processes. In fact, that pathology is simply a branch of the science of biology.

The test of the value of this conception of Virchow's is, that, year by year as new facts were discovered they fell naturally into place, and I can recall no better example of this than the way in which the neuron concept and all our later knowledge of the pathology of the central nervous system has naturally fallen into line with the cellular pathology.

From 1863 to 1867 appeared his work upon malignant tumors under the title, *Die krankhafte Geschwulste*. This was an embodiment of all those studies on tumors and their development, which had appeared at different times in the *Archiv*. His studies upon the origin of the tissue cell had directed him to the proper explanation of the question of histogenesis; his work upon emboli had cleared up the whole subject of the spread of these tumors in the body that is the subject of metastases; and his investigations into the subject of the connective tissue cell, enabled him to separate clearly the carcinomata or epithelial tumors from sarcomata or connective tissue tumors. This great work was unfortunately never completed, and although it contained errors it still remains one of the most exact pieces of investigation which we have upon the subject.

Succeeding years produced longer works upon chlorosis, syphilis, trichinosis, and other subjects, but as time passed his activities on the side of pathology became more critical than productive, owing largely to the fact that his interests had become so extended that he was unable to devote as much time to the exacting work of experimental pathological investigation. His duties as a teacher, however, were ever his first thought, and his museum was watched over and developed with zeal to the very last: in fact, during the last few years of his life, he was accustomed to spend an hour every Sunday in explaining to the public, who were admitted to certain rooms, the meaning and significance of the specimens. Indeed, in his interest in the scientific education of the public, especially of the working classes, he was singularly like Huxley, and like Huxley he devoted not a small portion of his time to this object.

In spite of his separation from the active work of pathological investigation in later years, one sees how closely in touch he remained with it all, when one reads his public addresses, such as the Croonian lecture of 1893 and the Huxley lecture of 1898.

Virchow's mind seems to have been of such a character that he

was compelled to follow out with the same faithfulness the side lines that opened up before him as he did his special work of pathology. And thus we find that his experiences in the Silesian Typhus epidemic not only threw him into the whirlpool of politics, but probably also was responsible for that interest in public sanitation, which in after years proved of such immense importance to the City of Berlin. In the same way his study of cretinism gradually turned his attention to Anthropology, to which science he was so devoted in after life.

I have alluded to his political activities, and certainly these deserve more than a passing notice. In 1862 he was elected as a radical member to the Prussian Diet, and he remained in that chamber until his death, as leader of the radical party and Bismarck's most redoubtable opponent; it is said that when, in 1865, he defeated the Government upon the motion to create a navy, Bismarck was so incensed as to challenge him to a duel, an honor, however, which he declined. His political work took not a small portion of his time, and for many years he was chairman of the finance committee of the house. That he did not find his political activities interfering in his regular scientific work shows what immense powers of concentration he had. However, when remonstrated with once upon wasting his time in politics, he said: "The dates of many of my lectures will prove that even on those days on which important matters claimed the attention of parliament, I have attended to my duties as a teacher. To set at rest the anxiety of my friends, I will add that the silent and often unnoticed labor of the scientist requires more energy and greater effort than the activity of the politician, which is both noisier and more speedily appreciated. The latter avocation has appeared often to be rather a recreation." In 1880 he was elected to the Reichstag, and remained a member of that body for some years, until in fact he was defeated by a socialist candidate: a commentary upon the fickleness of the electors of Berlin. As a municipal politician he occupied the position of a member of the Berlin Municipal Council for forty years, and during that period he initiated and carried out the whole system of public sanitation, which has made Berlin one of the healthiest cities of the world. The system of sewage disposal by filtration upon the beds of the sewage farm to the north of the city was the scheme to which he devoted his greatest energies, and which he carried through in the teeth of strong opposition; and from the time of its inception until his final illness he made his own special care the health of the work people upon the filter beds. It was with considerable pride, therefore, that he could point to them as as healthy as any other class in the whole population of Berlin. The housing of the working classes, the system of city hospitals, and many other sanitary improvements which have made Berlin so celebrated are due also to his personal interest.

There is yet another side to Virchow's life to which reference must be made. That is to the work which he did in the science of Anthropology. He was apparently led into this by his interest in the pathology of the skull, and especially by his studies on cretinism. But once his attention was attracted to it, he made the subject his own, and his investigations in that science alone would have sufficed to make him famous. As Professor Franz Boas points out, in a recent number of *Science*, the beginnings of his work coincide with the beginnings of modern physical Anthropology in Germany, and no man has done more to shape, guide, and foster this science than Virchow. He took a leading part in the formation of the German Anthropological Society, the Berlin Society, and in the establishment of the *Archiv für Anthropologie*. In connection with the German Society, he initiated the collection of statistics as to the distribution of the color of the skin, eyes, and hair in Germany. The results of this inquiry, with an extended discussion of the distribution of the different types, was embodied in a report by himself. In the allied subject of Archaeology he also took great interest, and in the year 1879 he accompanied his friend Schliemann to Asia Minor partly to assist him in his excavations at Hisarlik on the site of ancient Troy, but partly also for the sake of the holiday which he needed badly. His interest in the Trojan remains was very great, but it was characteristic of him that he should show even greater interest in the living inhabitants "upon the plains of windy Troy." He found them without medical attendance and with but the crudest notions in regard to the treatment of the prevalent diseases, and he began to prescribe, first for Schliemann's workpeople upon the excavations, and then for the villagers around, until at last his practice became so large that twice a day he had to examine long lines of waiting-sick, so that he had little time for Archaeology or rest. In order to enable them to obtain the necessary medicines he taught them the uses of the various medicinal plants that grew in abundance about them. The only reward was the deep gratitude, even veneration, of the people. Schliemann relates that a spring of water which broke out from an excavation which Virchow was superintending was afterwards regarded as of almost miraculous value; it was carefully surrounded by stones, and named the Physician's well.

In connection with Virchow's anthropological work, it is important to touch for a moment upon his supposed attitude towards Darwinism, an attitude which was persistently misrepresented by the opponents of the doctrine of evolution. In 1877, at a meeting of the German Naturalists and Physicians, he took occasion to refer to the doctrine of evolution, chiefly from the standpoint of anthropology. The address was at once taken to be an out and out attack upon the whole doctrine, and was considered of so much importance that the *Times* published it almost in full. As a mat-

ter of fact, the address was directed against the too hasty acceptance of unproved hypotheses, and by any one who knew the history of his early struggles with the older ideas in pathology, Virchow's attitude is easily understood; he was, in fact, ever afterwards extremely conservative towards all hypotheses, and his warning on this occasion was this, against teaching that the doctrine of descent should be taken as a proved fact whilst it was still an hypothesis; what he most feared was that the doctrine of evolution would lead to the spread of socialism among the masses, with the same consequences which the doctrine of the equality of man had in the days of the French Revolution. His language was in places most sarcastic, and the address drew from Haeckel, who was specially attacked, a bitter reply. His strong conservativeness in Anthropology is shown also in his attitude towards the interpretation of the significance of the Neanderthal skull; this famous relic of primitive man presents certain characters which were taken by most anthropologists to indicate a lower mental development than that seen in the later prehistoric crania. Virchow's position was one of reserve; the peculiarities were so strikingly like certain pathological conditions that he thought that judgment should be withheld until other examples were obtained for comparison.

Perhaps more than any other character was the breadth of view which Virchow maintained until the very last. Professor Osler, of Johns Hopkins University, in his address in Medicine at the meeting of the Canadian Medical Association a few weeks ago, took as his text Chauvinism in Medicine; perhaps there has never lived a better example of absence of Chauvinism than Virchow. He was truly a cosmopolitan, and when one reads, for instance, his tribute to Glisson in the Croonian lecture of 1893, or remembers his reference to Lister in the Huxley lecture of 1898, when in the midst of the lecture he turned to grasp the hand of Lister, as he sat on the platform beside him, one sees that for English medicine at least he had a very great appreciation; but the same was true also in regard to French and Italian medicine: he first taught the Italians to appreciate Morgagni as he taught the English to appreciate Glisson. And he ever taught that medicine knows no national boundaries.

In 1891 his seventieth birthday was celebrated; it was a triumph which few men have experienced, but it sank into insignificance before the much greater celebration of his eightieth birthday last October. On this occasion delegates appeared at Berlin from the whole civilized world to congratulate the master. On account of his age, he was not allowed to know anything of the extent of the fete before hand, but was carefully watched and guarded from all fatigue by his friend Waldeyer. The celebration lasted a week, and in spite of his age everyone was struck by his activity and the keenness of his mind.

In a very characteristic article in the December number of

the *Archiv* of last year, he returns thanks for the honors and congratulations that were showered upon him on that occasion. He says in one place, "For the quite extraordinary honors that have been conferred on me, I can do nothing more than repeat my warmest and heartiest thanks. The sense of obligation is too great to permit me to express in words my feelings. And I am now too old to begin new work which could be considered a fit return. I shall not tire in working as long as my powers hold out. But I can promise no more, than that I will endeavor to bring to a conclusion, useful for the world at large, a series of more extensive investigations which I began in my youth." Are we not reminded of Tennyson's Ulysses—

"How dull it is to pause, to make an end,
To rust unburnish'd, not to shine in use!
As tho' to breathe were Life. Life piled on life
Were all to little, and of one to me
Little remains: but every hour is saved
From that eternal silence, something more,
A bringer of new things; and vile it were
For some three suns to store and hoard myself,
And this gray spirit yearning in desire
To follow knowledge like a sinking star,
Beyond the utmost bound of human thought."

Perhaps the most touching incident in the whole celebration is given in the following words from his own article: "One night as I returned late from one of the fetes, I found to my surprise my little street, the Schelling Strasse, illuminated from end to end. I had not had the slightest idea that my neighbors felt so kindly towards me. But the street was filled with children also, many of them quite small, and I had to make my way to my house door through a regular lane of children, and the cries of jubilation of the little ones only ceased when I had disappeared into my house. And now as often as I show myself in the street, the little ones run towards me stretching out their hands and saying, 'Good morning, Herr Virchow.'"

If, in closing, we attempt to sum up what Virchow's influence in medicine has been, we see that it has been far more than the clearing up of our views upon individual pathological conditions, such as thrombosis and embolism, or the histogenesis of tumors, or even the pathology of the cell. It was something very much greater and broader. It was, first of all, the overthrow of the authority of dogma, and the establishment of the authority of observed fact. It was the transplantation of medicine from the barren fields of metaphysical speculation to the fruitful soil of experimental investigation. It was indeed the establishment of a new point of view in medicine, the point of view of medicine as a biological science.

And if in an earlier paragraph I stated that I did not propose this evening to address you upon the need of a biological training in medicine, perhaps I was in error, for what more concrete example could be given than a study of the life of Virchow?

PLEURISY WITH EFFUSION*

BY D. GILBERT GORDON, M.D., TORONTO,

Professor of Sanitary Science, Assistant Professor of Clinical Medicine, Trinity Medical College;
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AN inflammation of the whole or part of the pleural membrane causes the disease we call pleurisy. This inflammation has as its manifestation an exudation. The nature of this exudation determines not only the class to which a particular case belongs, but to a large extent aids us in coming to a conclusion as to its etiology and prognosis, and guides us as to treatment. I am not to concern myself in this paper with that form of pleurisy where the exudation is fibrinous, nor particularly with that which is purulent, but with that variety where the effusion into the pleural membrane is serous or sero-fibrinous.

The rapidity with which this exudation accumulates at times is surprising, a few days in some cases being sufficient time to fill the cavity up to the third rib. When this rapid effusion occurs, the inflammation is generally of the acute type. After all, this rapidity of effusion is not to be wondered at, when we realize the ease with which the liquid may leak out from the dilated capillaries, the edges of the endothelial cells being drawn apart as they are when the membrane is inflamed. Moreover, the absorbing power of a membrane is diminished.

The close relationship existing between a pleuritic effusion and tubercular disease of the lung, makes the closest study of the former not only advisable but necessary.

The cause of the inflammation of this membrane and the cause of the effusion is of the utmost importance to us, and especially is it important to ascertain if we can make up our minds as to whether the case under our consideration is of tubercular origin or not, and in the second place what likelihood is there of it becoming so. The difficulty of determining the presence of the tubercle bacillus in a pleurisy with effusion is often considerable. A patient may be tubercular, yet the pleurisy from which he suffers be non-tubercular in origin; and even when we are certain of the tubercular nature of the affection, the microscopical examination of the effusion gives negative results. Statistics regarding the future of pleuritis in order to be of any value, must extend over a number of years. And at this point, allow me to call attention to the rather strange fact that a pleuritic effusion seems to check temporarily a pulmonary tubercular affection so that a patient may live for years, even

*Read at meeting of the Ontario Medical Association, Toronto, June, 1902.

under circumstances not the most favorable to life. The reason, no doubt, for such delay, is the fact that the atelectatic condition of the lung, produced by the pressure of the effusion, prevents the free distribution in the lung of blood, lymph and air. The difficulty, in fact often the impossibility, of keeping our pleuritic patients under observation renders most statistics useless. Very valuable work has been done in this direction by V. Y. Bowditch. He reports ninety cases under the care of his father for thirty years, 1849 to 1879; of these ninety cases, thirty-two had become tubercular. In the *Boston Medical and Surgical Journal*, 1892, Sears reports a total of 451 cases with 176 deaths from tuberculosis, a percentage of 39. Most writers give the total percentage of deaths from tuberculosis in pleurisy with effusion as about 40. The probability, therefore, is that the percentage is larger. I think we are perfectly safe in assuming that sixty per cent. of pleuritics are tuberculous or become so. Bacteriological examination of the exudation as well as inoculation with it are unsatisfactory, both methods very frequently giving negative results even when we are certain of the presence of tubercle. It has been recently claimed that a microscopical examination of the exudation, as to the number of leucocytes existing in it, will determine the nature of the affection, whether it be tubercular or not, the diagnosis of tuberculosis depending on the number of leucocytes. This, it seems to me, must be uncertain, for although the leucocytosis is increased during tuberculosis, yet it may also be increased in other inflammatory conditions. This test, however, may be of some help.

Now as to the other forty per cent. of our pleurisies. Other infectious diseases are often followed by pleurisy, for example, pneumonia, scarlet fever, typhoid fever and septicemia. The old theory that cold was the most frequent cause of pleurisy is not now tenable, yet I believe in some cases it is the sole and only cause of an attack. In most cases, however, it must act as a predisposing cause only. The diagnosis of a pleuritic effusion is in most cases easy, yet there are cases where it is very difficult. It has frequently been mistaken for pneumonia. We expect to find, when an effusion exists, such physical signs as the following: Diminished or absent voice sounds or breath sounds, while in pneumonia we expect increased voice sounds and harsh breathing. Vincent Y. Bowditch reports four cases of probable pneumonia where the presence of an effusion was determined by aspiration in which marked bronchial breathing and increased voice sounds existed. In one of two cases where I have observed both bronchial breathing and bronchophony I have attributed it to the compressed or consolidated lung beneath, the vibration being conveyed through the fluid, a very necessary condition being the presence of well open bronchi.

Austin Flint, reporting a case of this kind, does not consider the sound as conveyed from the lung the cause. He offers, however, no explanation of the fact.

DeCosta says: "There are, however, exceptional cases of pleuritic effusion, in which bronchial breathing is heard all over one side of the chest. Especially does this happen if pneumonic consolidation accompany the effusion, but even in simple compression of the lung and where the collection of liquid is not extensive, bronchial respiration may be perceived."

Musser and Osler both state that in children the retention of breath sound is the rule.

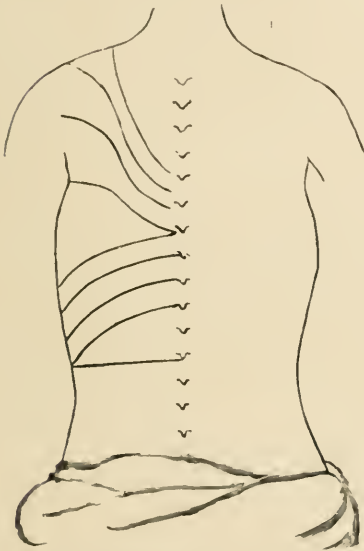


FIG. 1.—Showing curve of dullness from pleuritic effusion (back view).



FIG. 2.—*a, b, c* shows concave lines of dullness from pleuritic effusion. *e, f*, dullness in left-sided effusion (front view).

In the two cases which I have already mentioned, after close observation, I did not consider that the amount of fluid present affected in any way the intensity of the sound, but I concluded that it was due to the open condition of the small as well as the large bronchi, the sound being easily carried through the fluid from the lung beneath. The experiences of many writers differ somewhat from this.

Even though I may appear to be elementary in the following, I purpose to point out how a pleuritic effusion may be differentiated from a pneumonia. Mistakes of this kind we all know have been made, and are still being made.

In pleuritic effusion the initial chill is less severe; we have no rusty sputum. The ratio between the pulse rate and respir-

ation changes but little, that is, respiration increases more proportionately in pneumonia. The displacement of organs is a most valuable sign of an effusion.

But of all the signs which are of use to aid in diagnosis of pleuritic effusion, those obtained by percussion are undoubtedly the most valuable. If the exudation be small, the dulness will be first obtained behind, the fluid first appearing in the complementary sinns. Should there be as much as two inches of effusion, it will be noticed that the dulness line is convex in shape. This convexity becomes more marked when the effusion is greater. (See Fig. 1.)

The careful percussion of pleuritic dulness while the exudation is still small in quantity, is by far the most important means for its early protection. I believe I am correct when I say that it can always be detected, and that early, if sufficient care is taken.

When pleurisy is suspected, the chest should be carefully watched and examined for the presence of any effusion. The dulness or flatness always takes the S curve first described by Calvin Ellis and Garland. (See Fig. 4.) The shape of this line depends, of course, on the amount of the effusion.

I have found the most satisfactory method of demonstrating this dulness, one carried out thus: Ascertain by light percussion the spot (between the posterior axillary line and vertebral column) where it is thought the exudation reaches, then percuss lightly forward in a horizontal direction to the anterior edge of the lung. In this way the curve of flatness will be very noticeable, also the difference between lung dulness of resonance and fluid flatness will be clearly distinguished. This difference will be still more plainly recognized by firm percussion in the same manner about half an inch lower down.

In a moderate effusion when extending a little above the angle of the scapula, this method gives most accurate information. If with this we find just below the clavicle Skoda's resonance, we are certain of the condition. In a large effusion the flatness will extend over the scapula in an upward direction, down over the shoulder to meet the anterior angle about the third or fourth rib. The downward curve here is concave, not so marked a concavity, however, as is the convexity seen postero-laterally in smaller effusions. I consider the carefully percussing out of this concave line well repays for the trouble it gives, since it is a certain indication of the presence of fluid. (See Fig. 2.) The extremely tympanic note found under the clavicle in this case is entirely different from Skoda's resonance; it is not a lung sound, but is due to the presence of air over a completely compressed lung.

One other valuable percussion sign is the dulness existing in the cardia-hepatic space, which may often be early detected in left-sided effusions. The part over the sternum to the right of

the left parasternal line, extending between the fourth and sixth ribs, is always resonant in a healthy adult. However, in a left-sided effusion this early shows dulness, and this dulness can be detected when the exudation has reached as high as the eighth dorsal vertebra behind. (See Fig. 2.)

The value of the pleuritic friction rub as a means of diagnosis in the early stages of pleurisy is very manifest. Its presence should keep us constantly on the watch for effusion. Generally there is no difficulty in differentiating it from a rale of one kind or another, but at times it is not quite easy. A friction is more of a to-and-fro movement and more jerky than a rale. A fit of coughing does not cause it to disappear as it often does a



FIG. 3.—Showing curve of dulness from pleuritic effusion (side view).

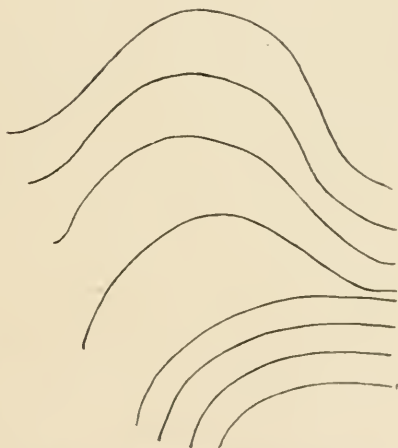


FIG. 4.—Lines of dulness in pleuritic effusion continuous from back to front, showing "Garland's S curve."

rale. Firm pressure with the stethoscope increases the intensity of the friction sound. This sound may be made more apparent by inclining the patient's body and head to the unaffected side, then elevating the arm on the affected side to a horizontal position. This elevation may be repeated two or three times, the patient taking a full breath before each elevation. Kellock's sign for the discovery of fluid in the pleural cavity is considered a valuable one by many. I have had no experience at all with it. The following description is Kellock's own as it appeared in the *London Lancet*: "The observer stands on the left side of the patient and, placing the left hand flat and fairly firmly on the lower part of the thoracic wall just below the nipple, percusses sharply either

with the finger of the right hand or with a pleximeter on the ribs of the same side, striking them just posterior to the angles, when, if no fluid be present, a very slight vibration of the rib, which is struck posteriorly, is felt by the left hand in front, but if there be fluid in the pleura, the vibration of the rib is much greater, and if the quantity of fluid be at all considerable, the difference between the sensations experienced by the left hand when examining the sound and affected sides, is most marked."

The treatment of these cases will depend on what conclusion we have come to as to the cause of the pleurisy.

As far as the effusion is concerned, I think a chance should be given it, for some time, to absorb. If, however, it be steadily and rapidly increasing, it should be withdrawn. A blister over the affected part will often aid the absorption. Reasonably free purgation is advisable. Nourishing diet without, however, too much fluid should be given. Perfect rest is important. The observation of this is especially so when we remember the injury sometimes done to the heart in this affection.

The most satisfactory treatment, to my mind, is undoubtedly paracentesis, and as a rule it should be performed early and repeated if necessary.

PLEURISY AS ASSOCIATED WITH TUBERCULOSIS.*

BY JOHN HUNTER, M.D., TORONTO.

IN the medical literature of pulmonary diseases, for decades before the discovery of the tubercle bacillus, there are to be found many evidences, if not of an assured faith, at least of a strong suspicion, that there exists a special relationship between pleurisy and tuberculosis—the latter being an exciting or predisposing cause of the former. Clinical experience and pathological research were too strong to allow the very frequent association of these diseases to pass as a mere coincidence.

The discovery of the tubercle bacillus in 1882 gave to bacteriology the mission of establishing the true relationship that exists between these diseases, and the years that have intervened since then have been utilized for this purpose. Three lines of investigation have been systematically followed: (1) Microscopical examination of the exudate in pleurisy—bacilli have been found in the exudate as well as in cultures made from it. It is true that the serous exudate is often sterile, even in cases of assured tuberculosis, but this fact in itself is now looked upon as being suspicious of a tubercular origin since numerous bacteria are to be found in the exudate of pleurisy due to cold, traumatism or other non-tubercular causes. The bacilli are to be found not only when the exudate is serous but also when it is fibrinous or purulent. (2) *Inoculations*.—The results obtained by this test—when a fairly large quantity of the exudate has been injected—have been of the most positive character. Experiments on guinea-pigs have given results such as the following: Where a tuberculous exudate was used, 50 per cent. of positive results were obtained. In cases where the pleurisy was attributed to cold 40 per cent. of the animals became tuberculous. In cases where the pleurisy was evidently due to other causes, *e.g.*, traumatism, pneumonia, etc., the results were negative. In one experiment the inoculations were made from fifty-five cases of pleurisy and 85 per cent. of the animals developed tuberculosis. In fifteen cases of pleurisy in which the tuberculin test was used 87 per cent. of these gave the general and local reaction. (3) *Clinical Evidence*.—Here also the evidence that a very large percentage of the cases of pleurisy are of tubercular origin seems indisputable. In recent text-books on the practice of medicine and in medical journals series of cases have been published, such as these: In fifty-seven cases of pleurisy twenty-one died of tuberculosis within ten years. In one hundred and thirty cases of primary pleurisy 40 per cent.

*Read at the Canadian Medical Association, Montreal, Sept. 1902.

became tuberculous within seven years. In ninety-two cases of pleurisy twenty-three died of tuberculosis within two years; forty-three had either definite tuberculous disease of the lungs or signs suggestive of it, and only twenty-one appeared to be healthy. In a collection of 310 cases of pleurisy 178, or 57 per cent., subsequently developed tuberculosis. In sixteen cases of fatal pleurisy in which the subjects were healthy before the attack, on *post mortem* examination miliary tubercle were found on the pleura in every case. Coming now to personal experience, I am sure I can safely state that every physician present, who has had a number of years in practice, can recall to recollection many cases of primary pleurisy that were soon followed by tuberculosis. How often have we sent away our pleuritic patients with a benediction and an assurance of their complete recovery, only to have them return to us a few months later the victims of tuberculosis and the dupes of a misleading prognosis. If we take all these facts into consideration are we not fully justified in stating that far more than 50 per cent. of all cases of pleurisy with effusion are due to infection by the tubercle bacillus. This conclusion has been arrived at from the writings of such authors as I have been able to consult, from opinions expressed by many of my confreres in Toronto, as well as from personal experience extending over more than a quarter of a century.

CLINICAL FEATURES.

1. *Primary Tubercular Infection.*—There is often a marked contrast between the physical type of those cases in which the pleura is first invaded by the bacilli, and those when the first manifestations of tuberculosis appear in the pulmonary tissues, the former often presenting the highest type of physical development, whilst the latter are usually wanting in physical stamina. It is quite a common experience when called to attend a healthy looking young man or woman to find symptoms that at once direct attention to the pleura as the seat of the disease. These symptoms may be briefly summarized as follows: The sudden onset of acute pain, which is most frequently located in mid-axilla or mammary region; a short, hacking cough that greatly intensifies the pain. Shallow respirations increased somewhat in frequency; an elevation of temperature from 1 to 3 degrees. This febrile disturbance affects the vascular and digestive functions. Within a few hours, or in some cases at a longer interval, a serous, or more frequently a sero-fibrinous exudate, is poured out into the pleural cavity. The exudate, if serous, may be so limited in quantity as to merely moisten the surfaces of the pleura, or, to form a thin layer, if fibrinous, and thus cause the pleural surfaces to adhere together throughout or in patches. In other cases the exudate, especially when serous, is poured out rapidly and in

such vast quantities as to expand the thoracic walls, compress the lung into a small, compact, airless mass, and displace the heart. The exudate may contain the following constituents: Serum, fibrine, pus, blood, and the various micro-organisms and their products.

The seat of the most acute pain may be very misleading, owing to the nerve supply of the lower portion of the chest extending over the upper part of the abdomen. Many patients have been treated for stomach or liver trouble when the pleura was the actual seat of disease.

The respiratory and cardiac distress are often extreme, when the amount of effusion is very great.

Another interesting feature, especially characteristic of the tubercular cases, is the rapidity with which the pleural cavity, refills after the fluid has been removed. In 24, 48 or 72 hours the dulness may be about as extensive, and all the other symptoms about as well marked as before the removal of the fluid.

The further progress of these acute cases is largely governed by the quantity and character of the exudate. If fibrinous bands have been thrown across from the parietal to the visceral surfaces of the pleura the exudate may be contained in a series of small cavities. If the exudate become purulent the pus may remain encysted, or it may discharge through the thoracic walls, or into a bronchus, or into the peritoneal cavity. If serous or hemorrhagic it may be completely or partially absorbed. If fibrinous the pleural surfaces become adherent. Whilst these changes are going on a very large percentage of these acute cases become affected with pulmonary tuberculosis.

When death takes place during the acute stage it is usually due to either the extreme compression of the lungs or displacement of the heart by the exudate. Other causes of death are exhaustion and septic poisoning from the absorption of the morbid products formed in the exudate by the action of certain bacteria.

2. *Secondary Tubercular Infection.*—Pleurisy is simply a complication of pulmonary tuberculosis in quite a large percentage of the cases ordinarily met with in general practice. In a much smaller percentage of cases the pleurisy is due to tubercular infection in the cervical, lymphatic glands, peritoneal cavity, or elsewhere in the body. In these tubercular subjects the onset of pleurisy as a complication usually intensifies the symptoms present. The pain is more acute and persistent. The patient often complains of "my side being always sore." Cough becomes more irritating and painful, respirations more shallow and frequent; emaciation, exhaustion and mental depression more marked. The temperature, especially if the exudate becomes purulent, assumes the hectic type. The dulness becomes more absolute, the dyspnea and cardiac distress increase with the amount of

effusion. When the exudate is sero-fibrinous and sterile and only in sufficient quantity to exert some pressure, thus restricting the expansion of the lung in which the bacilli have set up inflammatory action, the result may be very beneficial, as in this way rest is afforded to the inflamed lung tissues.

Etiology.—The bacilli or their products can reach the visceral layer of the pleura through the sub-pleural, bronchial or tracheal lymphatic glands, and the parietal layer, from the cervical, vertebral, mediastinal and peritoneal lymphatics. The tonsils and other glandular structures in the mouth and throat can lodge the bacilli and transfer them into the lymph channels. The pleura can be very readily infected from a tuberculous lung. Traumatism may render the pleural tissues much more vulnerable to tubercular infection. In brief, any causes that impair health may be more or less potent etiological factors in predisposing to tubercular pleurisy.

Diagnosis.—The personal experience of all the members of this association, and of those who may read this paper, the ready access to the very full descriptions of the symptoms and physical signs of pleurisy given in the text books, as well as to what has been stated already in the preceding pages, render unnecessary any further discussion under this head. All I wish to add is to emphasize the extreme importance of the physician making a most vigilant search for a possible tuberculous origin in all cases of acute primary pleurisy unless where obviously due to traumatism or other non-tubercular causes. It is not always necessary, or even generally prudent, to acquaint the patient of such a suspicion, but if the physician be governed by it himself it will perform the function of one of the modern powerful electric head-lights in use on the engines on our trans-continental "flyers" that "race with the lightning from ocean to ocean." A strong conviction of a tubercular origin in our cases of pleurisy will not only make us more guarded in our prognosis, thus saving us from the deep humiliation our errors in by-gone days were wont to inflict upon us, but it will throw a bright light far along our line of treatment.

Prognosis.—The results in tubercular pleurisy often bring upon the physician the opprobrium the surgeon is so frequently called upon to endure, when it is facetiously said that "the operation was a brilliant success, but it did not save the patient." The pleurisy may be relieved, but the patient succumb to tuberculosis.

The outlook is not always gloomy. When the disease is confined to the pleural surfaces, and proper treatment carried out, the prognosis is much more favorable than in pulmonary tuberculosis, for serous membranes, such as the pleura and peritoneum, are much less vulnerable to this infection than many of the other

tissues are. In Osler's *Practice of Medicine* it is stated that "the subsequent history of cases of acute pleurisy forces us to conclude that in at least two-thirds of the cases of tubercular pleurisy it is a curable affection." I think when the etiology of pleurisy is better understood we will be able to look forward very hopefully for a still larger increase in the number of absolute recoveries from the effects of this disease.

Treatment.—If the following statements be true, and at present the evidence seems conclusive, (1) that the vast majority of all cases of pleurisy are due to tubercular infection, and (2) that tubercular infection when confined to serous membranes is by far the most curable of all infections from this source, the general principles of treatment are well defined. The patient should be placed in the best possible environment in regard to dryness of soil, elevation, and abundance of pure air and sunshine. No cheaper or better accommodation can be found than a suitable tent, pitched on the southern slope of a moderately high hill. The pain can be relieved by external applications. Some prefer to use ice bags, but most patients find heat—dry or moist—more agreeable. Cough, beyond what may be required to remove serum from the bronchial tubes, should be relieved, as it not only increases the pain, but also irritates the inflamed surfaces. The functional activity of the skin, bowels, and kidneys should be increased. The temperature can be regulated by cold drinks, tepid or cool sponge baths, and by use of antipyretics. Special attention must be paid to the position of the cardiac impulse. Any impairment of the heart's action calls for extreme caution in the use of such depressants as the coal-tar preparations. The judicious use of stimulants and heart tonics is of great importance. The patient should be strictly confined to the recumbent position during the febrile stage, and especially if the heart's action be impaired. The question of diet calls for the most careful supervision. In the febrile stage milk and nutritious broths, and later, as much of the most nutritious food as can be digested. Every possible effort should be made to keep the patient well nourished and his strength maintained. Hunger, fatigue, sleeplessness, in brief, all depressing influences should be most scrupulously guarded against when the patient is able to be out. If there is any pain or soreness about the chest dry cupping or small "flying" blisters may be used. During convalescence deep breathing should be practiced very assiduously. The inflation of rubber bags is a valuable exercise. Change to a more suitable climate should be insisted upon if the progress towards recovery be retarded. A high, dry elevation is desirable, where frequent and deep respiration is a necessity on account of the rarified air.

The question of when to interfere in the removal of the effusion is often a very perplexing one. In many cases, when the fluid is

serous or sero-fibrinous, quite large quantities of it may be more or less rapidly absorbed. When the dyspnea is not urgent, and the cardiac impulse in normal position, it is prudent to wait, although the quantity of fluid may be quite extensive. The restriction of fluids and the use of saline cathartics, diuretics, diaphoretics, lung gymnastics, massage, dry cupping and a series of "flying" blister may be tried to help in the absorption of the fluid.

Fowler lays down the following indications for paracentesis: (1) When there are signs of positive intrathoracic pressure; (2) when the following symptoms which usually accompany the above condition are present—a small irregular pulse, and urgent dyspnea palpitation on slight exertion, lividly, or evidence of engorgement, and edema of the opposite lung. These symptoms may, however, be absent in cases accompanied by positive intrathoracic pressure so long as the patient is lying perfectly still. (3) When the fluid has been ascertained to be purulent its removal is necessary in all acute cases.

It may be necessary to remove the fluid more than once, but only a few repetitions can be borne by the patient without impairing his strength.

In aspirating strict antiseptic precautions must be observed. The needle, or the canula—if a trocar be used—should be about one-tenth of an inch in diameter and about three inches long.

The positions usually selected are the interspaces between the sixth and seventh ribs in the mid-axillary line, or between the ninth and tenth just outside the line of the angle of the scapula. The fluid should be withdrawn slowly, and a careful watch kept on the action of the heart and respiratory movements. On the occurrence of urgent dyspnea or faintness the flow should be stopped and stimulants given. When evacuation is complete or sufficient relief given some antiseptic dressing should be securely fastened over the puncture. The evacuation of a purulent exudate belongs to the domain of general surgery.

**REPORT OF A CASE OF CLAW-HAND RESULTING FROM
COMPOUND FRACTURE OF FOREARM: CURED
BY OPERATION.***

BY. H. P. H. GALLOWAY, M.D.

Surgeon to the Toronto Orthopedic Hospital, Orthopedic Surgeon to Toronto Western Hospital,
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A. B., aged 18 years, when a young child, sustained a severe compound fracture of the right forearm. Firm union, without any bony deformity, was secured; functional recovery was also entirely satisfactory. As the patient grew older, however, he began to experience difficulty in extending the fingers. This trouble gradually increased until finally it became impossible to straighten the fingers, except when the wrist was strongly flexed. The thumb was not involved.

I first saw the patient on July 1st, 1901. A scar on the anterior surface of the forearm opposite the junction of the middle and lower third of the radius marked the point where the bones had protruded when the compound fracture occurred in childhood. This scar was slightly depressed and firmly adherent to the underlying tissues.

When the wrist was flexed (Fig. 1) the fingers could be extended, but as the wrist was gradually brought into line with the arm, and then carried further into full extension, the fingers became fully flexed (Fig. 2), and could not be straightened either voluntarily or by passive efforts. Examination made it quite clear that the difficulty was due to shortness of the flexor tendons of the fingers. The tendons were long enough to permit extension of the fingers when the wrist was flexed, but too short when the distance between origin and insertion was increased by extending the wrist.

On July 4th, 1901, I performed the following operation: A longitudinal incision 3 1-2 inches in length was made in the middle of the lower part of the anterior surface of the forearm. Through this opening the scar corresponding to the old compound fracture was first thoroughly separated from the tissues to which it was adherent. This, however, produced no effect upon the contraction of the fingers. The flexor tendons of each finger were then carefully examined, and one after another they were lengthened to the extent that seemed necessary. The method employed to lengthen the tendons was that shown in figures 3 and 4. The tendon was transfixed, split longitudinally for 1 1-2 or 2 inches, and the knife made to cut its way out on the radial side at one extremity of the longitudinal incision and on the ulnar side of

*Read before the American Orthopedic Association at Philadelphia, June 7th, 1902.



FIG. 1.—Before operation. With the wrist flexed the fingers could be extended



FIG. 2.—Before operation. When the wrist was extended the fingers could not be straightened



FIG. 3.



FIG. 5.—After operation. Compare with FIG. 2.



FIG. 4.

the other extremity. The proximal and distal portions of the tendon were drawn past each other a sufficient distance to permit the finger to be straightened while the wrist was extended, and in this position were sutured.

The tendons of the flexor sublimus were chiefly at fault, but in connection with two of the fingers it was necessary to lengthen the tendons of the flexor profundus as well. In all, six tendons were subjected to the lengthening process. The segments of each tendon were united by a single anchoring suture of fine kangaroo tendon, more accurate adaptation being then made with catgut. A sheath was formed as far as possible by bringing together the subcutaneous tissue with catgut. For closing the external wound catgut was also employed, the subcutaneous method of suturing being used. Plain sterilized gauze was the dressing. Finally, the entire hand and forearm were encased in plaster of Paris, with both wrist and fingers in a slightly hyperextended position. Twelve days later the plaster dressing was cut along its radial and ulnar borders, so as to convert it into anterior and posterior splints, and on uncovering the wound it was found soundly healed, with the exception of a portion about three-eighths of an inch in length a little above the centre of the line of incision. After employing slight passive motion, the plaster splints were replaced, attempts at voluntary movement being postponed until several days later. At first the fingers were almost wholly paralyzed, but within a week of the first attempt at voluntary motion they could be moved quite freely, and in less than six weeks from the time the operation was performed, the patient could write legibly and rapidly, and could grasp my hand very firmly.

The present condition is shown in Fig. 5. With the wrist in line with the hand the fingers are practically straight, while in regard to function the hand may be said to be perfect. As a matter of precaution, a palmar splint is being worn on the hand at night, to guard against any possible tendency to relapse.

12 East Bloor Street, Toronto.

THE METHODS OF USING ARGYROL*

BY A. C. BARNES, M.D., PHILADELPHIA.

IN accepting your kind invitation to read a paper before you, I am deeply conscious of the honor conferred upon me, because many of your members occupy positions equal in honor and eminence with the leaders in modern progressive medicine. The subject I have chosen was selected for two reasons: First, as a body of practical physicians interested in the extremely important question of the treatment of disease, my subject will probably be interesting; second, my paper will be of the nature of an open letter in reply to many inquiries received from physicians in practically every state in the Union.

The original report of my colleague, Dr. Herman Hille, and myself, *Medical Record*, May 24th, 1902, concerning our discovery of a new silver salt was given considerable prominence in the medical press of America and Europe, particularly because of its wide field of application in therapeutics. This salt, now known as Argyrol, is chemically silver vitellin, the principal features of which are, the high amount of silver contained, its easy solubility, its intense penetrative action, and its freedom from the irritating properties possessed by the other silver salts. It is beyond the scope of this paper to deal with the chemical nature of the salt, and those interested therein are referred to our original report.

It is to the clinical applications of argyrol that I would now direct your attention, and more especially to the methods of using the product in inflammatory conditions of the eye, ear, nose, throat, and genito-urinary organs. The methods herein mentioned are those employed in the various clinics in many hospitals, including the University of Pennsylvania, City Hospitals of New York and Boston, Jefferson, Good Samaritan, Berlin Polyclinic, Children's Hospital, Philadelphia, and in some eye and ear infirmaries of several of our large cities, by surgeons whose names and reputations are well known to you: Martin, Thomson, Horwitz, Swinburne, Christian, Lewis, Lederman, Mellor, etc. Most of these surgeons are preparing or have already finished clinical reports embodying their experiences with the salt, which will be published shortly. My paper will be merely a short resume of the methods of using the product now in vogue.

Diseases of the Eye.—Those oculists using argyrol employ it in the conditions formerly treated by silver nitrate or protargol.

*Read by invitation at the 11th Annual Meeting of the Tri-State (Alabama, Georgia, Tennessee) Medical Society, Birmingham, Ala., October 9th, 1902.

The rationale of its use in these diseases is based upon its high proportion of silver, its deep penetrative action, and its entire freedom from irritating properties. For instance: a 20 per cent. solution of argyrol corresponds to about .10 per cent. solution of silver nitrate, yet this strength of argyrol may be dropped in the normal eye without producing irritation or discomfort.

In *purulent conjunctivitis*, a 25 per cent. solution has been found to be the proper strength for routine use. Well-established cases of *ophthalmia neonatorum*, thus treated, will be eradicated in two or three days. In the last ten cases of this affection, treated by Mellor at the University Hospital, one day's use of 25 per cent. solution argyrol suffices to rid the eyes of pus and effect uninterrupted recoveries. The argyrol solution should be dropped in all parts of the conjunctival sac every three or four hours. With treatment instituted early in the disease, corneal complications do not occur.

Gonorrheal ophthalmia is best treated by strengths of 25 to 50 per cent. solutions, according to the stage and extent of the infection. In very severe cases a 50 per cent. solution instilled every two or three hours produces a reduction of the purulent secretion and affords comparative relief from pain.

An ordinary early case of this disease treated with free use of twenty-five per cent. solution every two or three hours will terminate within a few days. For the catarrhal condition of the conjunctiva resulting from gonorrheal ophthalmia, many oculists direct the instillation of a 10 per cent. solution of argyrol three or four times daily; this may be done with perfect safety by the patient at home.

The effects of argyrol in *trachoma* are still unsettled. Gillfillan, of New York, used it at the House of Refuge with indifferent results; Thomson mentions one very pronounced case, in which the lids were so swollen that it resembled ptosis, and in which he obtained great improvement by painting the affected lids with 20 per cent. argyrol solution; this case had been treated with protargol without benefit.

For ordinary *catarrhal conjunctivitis* a 5 or 10 per cent. solution for use by the patient at home three times daily, with the local application of a few drops of a 25 per cent. solution by the attending physician, produces in most instances prompt and permanent benefit; this same method of treatment is employed in blepharitis, blepharo-conjunctivitis, and blennorrhea. The most suitable strength for all-round office use in treating corneal ulcers and the ordinary inflammatory conditions of the eye is 25 per cent.; this strength does not cause irritation or discomfort.

The methods of using argyrol in diseases of the *nose, throat, and ear*, are perhaps best illustrated by quoting the experience of Dr. M. D. Lederman, of New York, who has been using it for

four months in his private work and at his clinics at the Manhattan Eye and Ear Hospital, and at the New York Polyclinic. Dr. Lederman states: "I have employed solutions from 10 to 50 per cent. in catarrhal manifestations of the nasal, pharyngeal, and laryngeal mucous membrane; the applications were made with the usual cotton carrier every other day. The advantage this silver salt distinctly demonstrates is its freedom from irritation when applied to sensitive mucous membranes. In acute and subacute *laryngitis*, I have used a 10 per cent. solution, increasing to 30 per cent. without the least unpleasantness to the patient. After two or three treatments the congested appearance of the membrane gradually left, and the voice returned in good volume; I particularly noticed that the harsh and dry sensation produced by silver nitrate was never experienced. The secretion was promptly stimulated by the argyrol solutions, and produced a comfortable feeling of moisture in the pharynx and larynx. In *post-nasal catarrh*, the character of the discharge was influenced by the argyrol solutions (20, 30, and 50 per cent.). The thick plugs of mucus so frequently expectorated in cases of *naso-pharyngitis*, and in *inflammations of the lymphoid tissues* in the pharyngeal vault, become more fluid in consistency, showing the stimulating effect of the drug upon the mucous glands, and thus permitted the re-establishment of the normal function of the membrane, and relieved the annoying symptoms of hacking and dropping in the throat; the same effects were noted from applications to the nasal mucous membrane.

The bland nature of the argyrol solutions was especially observed in cases of so-called "hay fever." Ten and 20 per cent. argyrol solutions, while naturally exciting some sneezing, as would result from any foreign element, seemed to lessen the existing hyperesthesia and retard the excessive flow of secretion; this blenostatic action I believe is due to the deep penetration of the argyrol.

The decided anti-germicide action of the salt is illustrated by its effects in cases of *chronic purulent otitis media* with osseous necrosis. In these cases I employ a 50 per cent. solution, freely, in the middle ear cavity, without any annoyance to the patient. The purulent character of the discharge is obviously modified after a few treatments, and assumes a mucoid appearance."

In empyema of the antrum of Highmore, Hitschler uses a 50 per cent. solution of argyrol once daily, and note prompt disappearance of the purulent discharge.

Genito-Urinary Diseases.—Dr. Orville Horwitz, Professor of Genito-Urinary Surgery, Jefferson Medical College, treats acute cases of gonorrhea by ordering the hand injection of a 5 per cent. solution of argyrol several times daily, with whatever modifications and additions to treatment the cases may demand.

In acute gonorrhea, Dr. H. M. Christian, Professor of Genito-

Urinary Diseases, Philadelphia Polyclinic, employs a 2 to 5 per cent. solution by injection (by ordinary hand syringe) three or four times daily; the solution is held in the urethra five minutes. If the entire urethra is involved, he employs daily irrigations of 1 to 1,000 solution.

In *chronic posterior urethritis* he makes deep instillations of 5 or 10 per cent. solutions. Of his first forty-eight acute cases thus treated, forty-three showed complete disappearance of gonococci from the discharge within fourteen days; thirty-eight of these patients were discharged cured in from two to four weeks.

In no instance did the injections produce irritation or discomfort.

Dr. G. K. Swinburne, Surgeon to the Good Samaritan Dispensary (the largest genito-urinary clinic in New York) has treated over 400 cases of gonorrhea with argyrol. His methods are as follows: In acute cases he irrigates the urethra daily with a 1 to 1,000 or 1 to 2,000 warm argyrol solution, and follows this by a 2 to 5 per cent. injection. If the patient cannot report daily, he orders the home use of a 2 per cent. injection. He uses argyrol solution for irrigation where formerly he used potassium permanganate or protargol, because of better results and greater comfort to the patient.

In *posterior urethritis* and *cystitis* he makes deep instillations of a 5 or 10 per cent. solution. In chronic cases, and in those requiring sounds, he employs an ointment of 5 per cent. argyrol in lanoline, the ointment being distributed along the urethra by the successive use of several sounds, upon the end of each of which the ointment is placed.

In acute cases of gonorrhea, seen during the first or second day of the attack, he injects a 20 per cent. solution, and has succeeded in aborting the disease.

Briefly stated, the advantages noted in the argyrol treatment of urethritis are: The shorter duration of the disease, the power of the drug to allay the inflammation, the comparative comfort afforded the patient, and the entire freedom of the injections from irritating properties.

Diseases of Women.—In *Specific Urethritis* in the female, Kevin injects a 10 per cent. solution into the urethra and bladder. In purulent conditions of the vaginal mucous membrane, the vagina is douched with 1 to 2,000 or 1 to 1,000 argyrol solution, after which local applications of a 25 to 50 per cent. solution are made through a speculum; these same methods are employed in ulcerations and erosions of the cervix.

Cases of *cystitis* are irrigated with 1 to 1,000 solution, followed by the injection of a 5 or 10 per cent. solution into the bladder, which is retained there for a few minutes and then discharged by urination.

In *obstetrics*, argyrol is probably destined to play an important part because of its usefulness as a prophylactic against *ophthalmia neonatorum*. In several maternity hospitals the instillation of a 1 or 2 per cent. solution into the newly-born infant's eyes is a routine practice.

Other clinical conditions in which the use of argyrol has been suggested, and is being tried, are erysipelas (suggested by Dr. E. B. Gleason, Medico-Chirurgical Hospital, as local applications, 25 to 50 per cent. solution, and certain pathological conditions of the mouth and teeth (suggested by Dr. W. H. Snider, of the University of Buffalo). It is too soon to make any positive statements of the methods or effects of using argyrol in these two latter conditions.

It will be noted in reviewing my paper that argyrol has been used in almost every branch of surgery, but it will be recalled also that silver has been for many years the principal drug in nearly all of these conditions. Silver nitrate is a very valuable remedy, but its chemical nature necessarily endows it with certain drawbacks, viz.: it is irritating, caustic, is chemically changed by the secretions, and is not penetrating much beyond the surface. Argyrol is not chemically changed by the secretions, possesses intense penetrative power, whereby the effects of silver are exerted in the sub-mucous structures (where they are most needed), and may be used in any structure of the body, in almost any strength, without destroying tissue or producing irritation. Furthermore (as all the surgeons mentioned herein have noted and commented upon), argyrol has one very marked property, *i.e.*, its effects in allaying the signs and symptoms of inflammation.

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The Canadian Journal of Medicine and Surgery

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Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. XII.

TORONTO, NOVEMBER, 1902.

NO. 5.

Editorials.

THE TEARING OFF OF THE SCALP BY MACHINERY.

THE tearing off of the whole, or a considerable portion, of the scalp, as it is ordinarily brought to a surgeon's notice, results from the operation of violent and sudden traction on the cranial integuments of a female, owing to her hair being twisted into a rope while the remainder of her body is fixed by its own weight, or the instinctive efforts of the victim to resist the traction. Probably such an accident would never occur if all female operatives in factories were obliged to wear their hair short; and it may be re-

marked, that from the view-points of safety, and hygiene as well, such a practice would have much to commend it.

Female operatives are sometimes unwilling to take the necessary time to arrange their toilet before appearing on the street. Without waiting for the machinery to stop, they secretly let down their hair, throw it forward so as to remove with a comb the dust and debris which fill the atmosphere of a factory, smooth the hair, and then, by a sudden jerk of the head, throw the hair backwards, so as to twist it into a knot, and it is during this latter movement that the hair is apt to be caught by the rapidly-revolving machinery.

In other instances, an operative, wishing to go by a short cut from one part of a factory to another, passes under the axles or the straps; a misstep throws her near the fly-wheels, cogged wheels, etc., and, without having time to lower her head or withdraw, her hair is caught and twisted by the tremendous force of the moving machinery.

The mechanism by which the scalp is torn off has been studied by Fouchard in the dead body, and he shows that it is produced by a powerful tractive force operating obliquely from before backwards. Hence, under these conditions, the integuments are cut by the prominent bony edges of the supra-orbital arches, the tear through them running in the direction of the nape of the neck. This mode of traction is almost constantly observed in female operatives, who, when their hair has been caught by moving machinery, endeavor to escape by bending the body downwards or by jumping away from the machine. In an accident of this nature the absence of primary pain and hemorrhage in the recipient of the injury has been observed. Contrary to what might be expected, primary pain is not much complained of, and hemorrhage is slight. The absence of pain has been thought to be due to the extraordinary rapidity with which the nerves are torn through. The absence of hemorrhage is said by Fouchard to be owing to the fact that the arteries are subjected to a species of torsion. The vessels are violently stretched, and their coats, having unequal powers of resistance, do not all break at the same instant. The tunica media and the tunica interna, which are not very elastic, break, and shrink back into the lumen of the artery, which is thus stopped, while the tunica externa extends itself like a piece of glass tubing held between two hands in the flame of a lamp, and in tapering out to a fine point, closes the vessel.

From a personal observation the writer of this article can confirm the fact that primary pain and hemorrhage are not observed in an injury of this kind. A girl, sixteen years of age, whose scalp had been torn off by the machinery of a shoe factory, was seen by the writer about twenty minutes after the accident had occurred. She sat on a chair composedly enough. There were a few tears in her eyes, but no other outward manifestations of mental distress or pain were visible. There was some hemorrhage about the nape of the neck, where the torsion of the arteries had not been effective; but the greater portion of the immense wound was bloodless. The white and remarkably thin periosteum of the skull, flecked here and there with a droplet of blood, was exposed to view; her whole scalp lay on the floor. There was no evidence of surgical shock.

It is needless to say that an effort to restore the torn scalp to its former place would be unjustifiable; the greatest antiseptic precautions, and the most perfect disinfection of the injured scalp would not avail to preserve the vitality of tissues, which had been soiled with the grease and dirt of machinery, the dust of the factory, and all sorts of debris. Should such an attempt be made, everything would favor septic suppuration, so that the idea should be abandoned at once.

The surgical treatment of a case of this kind, therefore, resolves itself into: Complete asepsis of the wound, followed by the introduction of skin grafts, when the granulations of the wound are in a suitable condition to receive them and make them thrive.

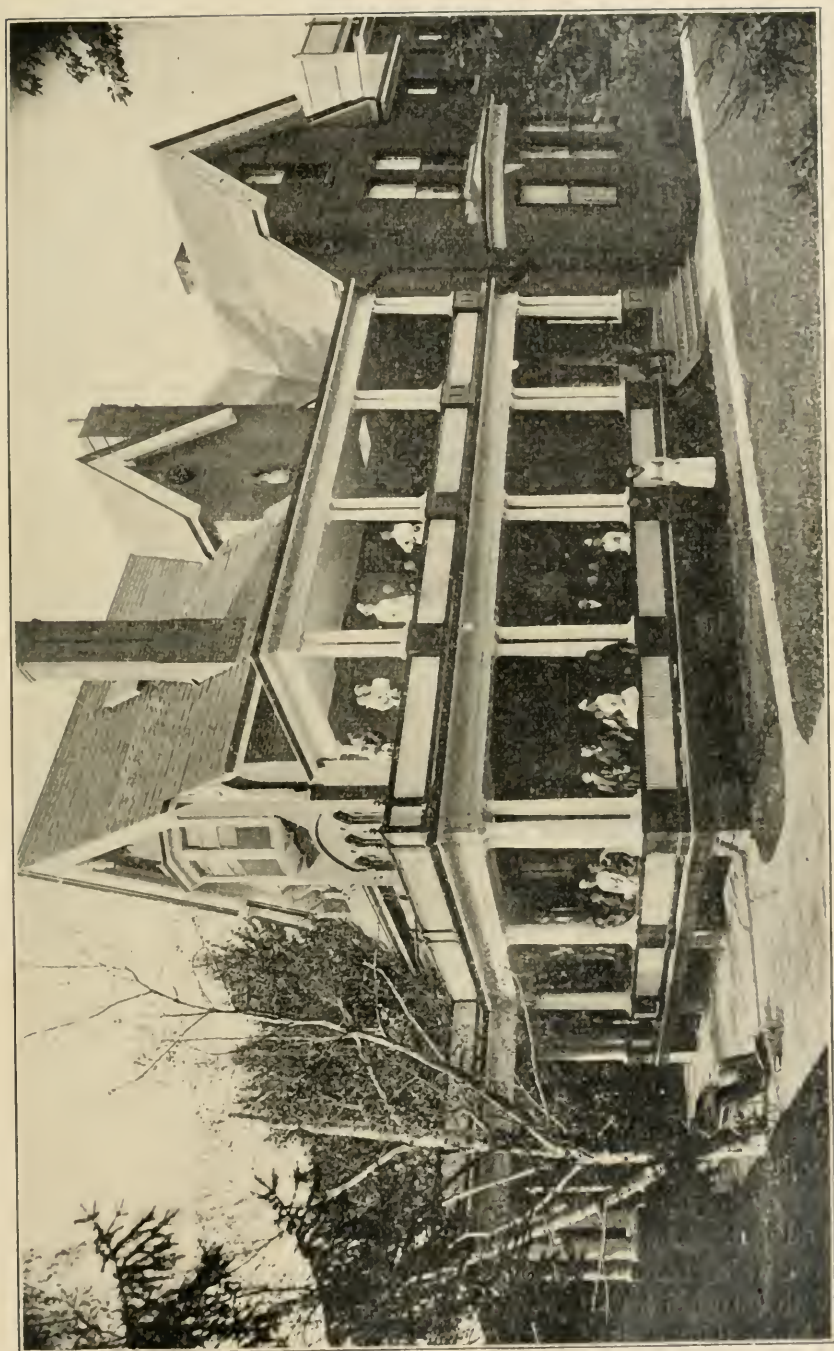
Dr. Fochier, a Parisian surgeon, after a preliminary cleansing of the wound with antiseptic lotions, applies without delay the styrax ointment of the French codex, a stimulant antiseptic preparation, which assists powerfully in restoring the vitality of the injured parts. It is somewhat like the resin ointment of the British pharmacopeia. Suitable tonics are also required, and the patient should be placed in good hygienic conditions, so as to enable the organism to resist the invasion of microbes and the effects of their toxins, which would be disastrous. As far as prognosis is concerned, accidents of this nature are less dangerous to life than one would think. Romme says, in *La Presse Medicale*, that with modern treatment they cause a mortality of 8.5 per cent. Everything should be done to maintain the strength and vigor of the patient, and also to keep the wound in a clean

condition. The reparative power of youthful tissues is really extraordinary, and it is preferable to let nature have a fair opportunity to fill up the gap rather than to resort to grafting too soon. On no account should the patient be subjected to the shock of anesthesia in obtaining the material for grafting. It certainly ought to be more satisfactory to all concerned, if the enormous wound should be healed even after fifteen months, rather than that the patient should be made to succumb to injudicious efforts put forth to cure it in half that time.

J. J. C.

THE NEW TORONTO ORTHOPEDIC HOSPITAL.

Not a stone's throw away from the Alexandra Gates of the Queen's Park, on the north side of Bloor Street, is situated the new Hospital, surrounded by trees that nod like the old folks they are, and whisper to each other tales of yesterday when such things as Orthopedic Hospitals were unthought of, and shivers run through their branches as the noisy trolleys go by blatantly disturbing their soft crooning, as they bend gracefully before the breeze. Amid such environments rises the handsome three-story brick structure with spacious verandahs above and below, in fact, fitted into and adjusted wherever there is any possible space, adding very much to the imposing outside appearance of the building. Upon entering the main hall, the newness, the swept and garnished appearance immediately impresses one, especially perhaps owing to the whiteness of the walls, which are for about four and a half feet from the floor, finished in the rough, cement and pulpwood forming the plaster, and the remainder of the walls are finished in the regulation smooth-surface white plaster. The bareness of effect is fittingly relieved by a "speaking likeness" in oils of Rev. John Potts, D.D., the President of the Board of Management of the Institution. This creditable portrait is the work of Mr. J. W. L. Forster, and surely never artist's brush caught and transferred to canvas better that gleam of Irish humor "in the tail" of his subject's eye, for, standing at the door of the reception-room opposite, and a little to the left of the picture, one could almost imagine he heard the reverend gentleman in his kindest, most persuasive tones, appealing to the elect ladies on the Board of the new Toronto Orthopedic Hospital to make the institute worthy of its name! And still enough of that half-smile lingers in the eyes



THE NEW TORONTO ORTHOPEDIC HOSPITAL, BLOOR STREET WEST.

to bid welcome to all who enter the portal, or encourage those who perchance linger anxiously awaiting to learn the physician's diagnosis of the case of their loved one.

Proceeding through the hospital, we noticed further its completeness in every detail.

Near the entrance on the main floor is the office, fitted up with desks and all office conveniences, and the reception room. Close at hand is the Lady Superintendent's room. There are also on this floor several semi-private wards, with accommodation for six or seven patients, each airy and well lighted.

The first floor is given up to private wards, and is elegantly finished and furnished in oak. Adjoining these wards is a parlor in oak, with oriel windows, specially designed as a reading-room for the occupants of the private wards. These wards open by French windows on to verandahs over ten feet in width, providing a pleasant and dry promenade. A number of these rooms have been taken in charge by philanthropic friends, who have assumed all responsibility for the furnishing and sustaining of them, among these generous donors being Mrs. (Judge) Macdougall and Mr. Harry Hees, and the Berean Bible Class of Central Methodist Church. Facing West is a bright room set apart for the house-keeper. In this is a large cabinet, in which it is intended to keep all the linen and bed clothing for use in the hospital until it has been thoroughly prepared for use and distributed among the various wards, when it passed under the direction of the head nurse.

On the next flat is the public ward, where there is accommodation for twenty-two public patients, for whom are provided just the same sanitary conveniences as for the patients in the wards below. Mrs. Geo. A. Cox and Mrs. T. Eaton have donated the furnishings for two of these wards, which are bright and comfortable, and fitted up in the most approved style. Connected with this floor is a roof garden, 20 by 40 feet, where the patients go for exercise or for a sun bath as they may desire, there being accommodation for either walking, sitting, or reclining.

The equipment for operative surgical work is the very latest and best. The room is 20 by 24 feet, and is floored with terazza. The walls are composed of a marble dado with coping for six feet, with hard finish wall above to the full height of fifteen feet. The room is lighted with west and north windows provided with luxfer prisms, and will be fitted up with metallic seats to accommodate

sixty students. Off the main operating room is a suite of rooms: the Surgeon's dressing-room, the sterilizing room, with cabinets for storing hospital supplies, the anesthetic room, the recovery room, where patients are kept while recovering from the anesthetic, and a second operating room for cases that have become infected, it being the object to maintain the main operating room in a thoroughly aseptic condition. All these rooms, with the exception of the recovery room, are floored with the terazza. A special heater in the basement supplies hot water for the operating room at high pressure.

The heating of the entire house is by steam, and in the private wards, sitting-rooms, etc., gas grates are also provided. The kitchen is equipped very thoroughly with many things very suitable for hospital service, such as a full set of granite ware, a movable table, with closets underneath, a broom closet, a fruit room, and a cold storage room, with a stand for cereals, in which the drawers move on rollers, with a marble top for a pastry board. Adjoining are nurses' dining-rooms and pantries, with every convenience. The laundry is supplied with the Troy laundry apparatus, steam-heated mangle, patent drying room, disinfecting washer and centrifugal extractor.

In connection with the hospital is a dispensary for out-door patients, where the services of the hospital staff will at certain hours be at the disposal of the poor, who are able to take treatment without becoming residents of the hospital. In the yard are a number of tents, in which patients are housed for whom life in the open air is a valuable aid in treatment. These tents accommodate about twenty patients, while the building provides accommodation for seventy-five more. The building and equipment has cost about \$40,000.

We heartily congratulate Dr. McKenzie and Dr. H. P. H. Galloway upon the magnificent success of the undertaking, of which years ago, when they spoke of the project, it was regarded by many as only such stuff as dreams are made of; to-day the reality rises a monument to the steadfastness of purpose and untiring energy of its progenitors.

W. A. Y.

THE PROPORTION OF DOCTORS TO POPULATION IN CANADA AND CANADIAN CITIES, AND IN CERTAIN COUNTRIES AND CITIES OF EUROPE.

CANADA, according to the official census of 1901, had a population of 5,369,666. We have made inquiries to ascertain the number of doctors practising in the different provinces and the North-West Territories, and learn that, all told, they number 5,417. That is to say, that for every 991.07 persons in Canada there is one doctor, or for every 10,000 persons, 10.09 doctors. From statistics compiled by ourselves, we state that for every 10,000 inhabitants in Manitoba there are 13.49 physicians; 12.07 in British Columbia; 11.4 in Ontario; 10.41 in Nova Scotia; 9.43 in the North-West Territories; 8.54 in Quebec; 8.07 in Prince Edward Island; 7.33 in New Brunswick. Toronto, the capital of Ontario, has 20.06 physicians per 10,000 of population; Montreal, the most populous city of Quebec, has 10.75. We have been induced to make these calculations, as a matter of interest in connection with the medical history of Canada, and in order to establish comparisons between this country and the older countries of Europe. Recent statistics showing the proportion of doctors to population in different European countries appear in an article by Prinsing, published in *Centralblatt für Alg. Gesundheitspflege*, t. xxi., 1902, fasc. 5-6, p. 218. They show that, for every 10,000 inhabitants, there are 5.1 physicians in Germany, 4.1 in Austria, 2.8 in Hungary, 6.3 in Italy, 6.1 in Switzerland, 3.9 in France, 7.1 in Spain, 5.2 in Belgium, 6.1 in England, 5.6 in Ireland, 7.7 in Scotland, 6.4 in Denmark, 5.3 in Norway, 2.7 in Sweden, and 2.7 in Russia in Europe. Scotland, therefore, holds the European record for the greatest number of doctors in proportion to population. In succession come Spain, Denmark, and Italy. France, on the other hand, occupies one of the lowest places, viz., 3.9. Among the European capitals, Paris is least favored by the sons of Esenlapius, as there are but 9.7 physicians for 10,000 population in that city.

On the other hand, London has 12.8, Vienna, 13, Berlin 14.1, Brussels 14.7, Budapest 16.4, and Madrid 24.4. Statistics of this kind, while supplying food for thought, still leave the mind

unsatisfied as to the reasons which make for undue development of our profession in some countries or cities, and its mediocre number in others. However, one fact is patent: There is a larger proportion of doctors in Canada than in any country of Europe. The only European city surpassing Toronto in the relative number of its doctors to population is Madrid. That doctors should be numerous in Madrid is reasonable enough; for, as Ford says in his handbook published forty years ago, "The subtle air of Madrid, which will not extinguish a candle, puts out a man's life. . . . No wonder, according to Salas, that even the healthy of those born there live on physie." Modern hygiene has probably ameliorated some of the conditions which make for a large mortality in Madrid; but the mortality of that city was said by Chanter Evely (1890) to be over 34.0.

Neither a large mortality, nor a considerable morbidity, are noted in Toronto, so that these can not be the determining factors of our large medical population. Accepting the figures of the Dominion census of 1901 (208,040) as the true population of Toronto, the mortality for that year in Toronto was 17.06 per 1,000 of population. If we take the police census of the same year (about 220,000), the mortality would be less. One reason for the large number of doctors in Toronto is that there are three medical faculties in this city, which require the services of about one hundred physicians. Besides, several consultants and specialists, whose services are in demand throughout Ontario, reside in this city. Above all, however, Toronto is a model city—a centre of education and culture, and doctors appreciate the *utile dulci* in their homes as well as other men.

Provinces and Territories.	Population.	Physicians.
British Columbia....	177,272	214
Manitoba.....	254,947	344
New Brunswick.....	331,120	243
Nova Scotia.....	459,574	476
Ontario.....	2,182,947	2,500
P. E. Island.....	103,259	90
Quebec.....	1,648,898	1,400
N. W. Territory....	158,940	150
Unorg. Territory....	52,709	
Canada.....	5,369,666	5,417
Cities.	Population.	Physicians.
Montreal.....	267,730	471
Toronto.....	208,040	430

HOSPITAL FIRE BRIGADES.

UNDER the caption, "Female Nurses as Fire Lassies in Bellevue," is a little skit in an American contemporary. It seems the eighty-four nurses in Bellevue Hospital, New York City, are receiving a course of instruction so as to be able to take an active and efficient part in case of fire in that institution. Heretofore the attendants and laborers employed in the hospital have been the only ones to turn out when the fire whistle blew. Under the new regulations it is a case of house doctors, male and female nurses, officers, clerks, internes, *et al.* The women nurses will also be made equally responsible for the removal of patients to places of safety. The young women in the classes of the training school for nurses are rather rebellious, and, if they dared, would decline to learn the new accomplishment of rushing for "hook ladder and axe"—"every time that horrid whistle blows."

How distressing if such a rule should be made in the Toronto General Hospital: it certainly would grieve gentlemanly and considerate Dr. Charley O'Reilly, and likewise dignified Miss Snively, to have to impose such a strenuous task upon the dainty Dollies in their service; but, on the other hand, its "up to" Toronto General, under its never disappointing Superintendency, to take the lead, in every detail, in Canada, and stand, as ever, first in peace, in war, and in the hearts of the profession. But, when the first drill of the fire brigade occurs, composed of the entire staff of the Toronto General Hospital, may we and our camera be sitting on a reel!

W. A. Y.

EDITORIAL NOTES.

The Disinfection of Books by Means of a Spray of Formalin.

—A reliable, cheap, and easy method of disinfecting books which have been contaminated with bacilli tuberculosis has long engaged the attention of medical experimenters. That infectious diseases may be disseminated by the means of books has been for some years recognized as a fact. Young wrote on this subject in the *Sanitary Record*, 1898. Knopf, of New York, in 1900, wrote of the danger of tubercular infection caused by books, which had been used by phthisical patients. One source of danger mentioned

by him was the habit indulged in by a phthisical patient of turning over the pages of a book with his fingers which had been moistened with his own saliva. Knopf mentioned another source of infection: Coughing or sneezing by a tubercular patient, by which bacteria-bearing droplets from the mouth or nose are projected into the air of an inhabited space. Experiments have been recently made by Barbe, of Paris (*La Presse Medicale*, Aout 23, 1902), which appears to demonstrate that formalin may be successfully employed in disinfecting books which have been contaminated with the sputa of tubercular patients. The books were suspended from wires in an air-tight box. He shows that the simple exposure of a contaminated book to the vapors of formalin placed in a cup (5 grams of formalin per cubic metre) in an air-tight box will not suffice to destroy the bacilli tuberculosis in the book. Instead of allowing formalin to evaporate slowly from a cup in a box, Barbe inserted the tip of a Richardson atomizer through a hole in the bottom of the box, and sprayed a solution of formalin of a strength similar to the one used in his first experiment over the books. The mode of vaporizing the antiseptic was thus made rapid and instantaneous, quite different to the slow method of vaporizing formalin from a cup. Experiments made on guinea pigs are quoted to prove that vaporizing formalin from a cup in a box did not destroy the bacilli tuberculosis in the books treated, while, on the other hand, complete success attended the use of the spraying process. The author says: "The disinfection of books is easy. A box suffices for a few books; a cupboard will be required for a library, in which a hundred books are returned every day. In the latter case any air-tight cupboard, of a sufficient size, provided with wires, from which clippers for holding the books could be suspended, would answer. A hand-spray atomizer, however, would not be large enough for such a cupboard. He recommends a formogenic autoclave, placed outside the cupboard with the delivery tube arranged so that it can be introduced through one or several openings in the side of the cupboard. The Barbe method of disinfecting books appears to be easy of execution, cheap and reliable, and we cordially recommend it to all whom it may concern.

The Metric System in America and Canada.—It is suggested by Harold Cox, in the *London Times*, that the introduction of the metric system into English-speaking countries would be hastened

by impressing on the public mind the fact that traditional names and quantities need not be abandoned. In France, after more than a generation of struggle, the simple device was adopted of defining the livre as half a kilogram, and the work was done. To-day the word livre is constantly used all over France, but everybody knows that a livre is exactly 500 grams, or half of one kilogram. This step was taken in Germany before any general attempt was made to introduce the metric system. When the Zollverein was established, the pfund was made exactly equal to half a kilo, and thus the way was prepared for the rest of the metric system. In Germany the word pfund is invariably used in preference to halb-kilo. Certain English weights and measures approximate closely to convenient metric equivalents. The pound avoirdupois is very nearly equal to half a kilo, the cwt. to 50 kilos, the ton to 1,000 kilos. By introducing these names, we give the mind something to take hold of. "Metric pound" at once suggests a weight like a pound, whereas kilogram suggests nothing at all. Other links that might be used with advantage are: The metric inch (25 millimetres), the metric hand (10 centimetres), the metric chain (20 metres), the metric pint (one-half litre). Inasmuch as a decimal coinage exists in the United States and Canada, the introduction of the metric system of weights and measures into these countries is beset with less difficulty than in England. It would certainly facilitate the introduction of the metric system into North America if traditional names should receive a present legal value in legislation. For instance, a simple declaratory Act might be passed at the next session of the Canadian Parliament, providing that wherever the phrase metric pound is used in a contract of sale, it shall mean 500 grams, and so on. Who will start the ball rolling? We commend this reform to the careful consideration of our American cousins, hoping that they may be daring enough to cast aside the shackles of antiquity, and introduce a reform in English weights and measures, retaining at the same time some of the forms of the old-time usage.

Acidified Alcohol in the Treatment of Wounds which are Expected to Unite by the First Intention.—As the results of experiments made at the surgical clinic of Naples, Dr. Gaetano recommends acidified alcohol in the treatment of wounds in which union by the first intention is expected. The alcohol he uses has

a strength of 70 per cent., and contains 20 drops of acetic acid to 100 grams of alcohol. The following prescription nearly represents Gaetano's formula:

R Acid Acetic fort.....℥ XL.
Spt. Rectificati 70 per cent..... $\frac{1}{5}$ viss.
M. Sig.: For local use in dressing sutured wounds.

This is a very different preparation from one which we saw credited to Dr. Gaetano recently in a New York contemporary, viz.: "a 20 per cent. alcoholic solution of acetic acid." To obtain union of a wound by the first intention, Gaetano sutures it with catgut, which has been wet with acidified alcohol. After suture, the wound is bathed with the same liquid, in which are also steeped the gauze compresses which are to be put over it. An ordinary dressing is placed over all. The dressing is changed every second day, being bathed on each occasion with acidified alcohol. After six days the catgut sutures are removed, but the wound is covered as long as occasion may require with gauze compresses wet with acidified alcohol. Gaetano states that, in addition to its anti-septic power, this preparation possesses the very great advantage of making the wound as dry as possible, which in itself makes germ invasion unlikely.

The Continued Presence of Typhoid Bacilli in the Urine of Patients Convalescent from Typhoid Fever.—During recent years several authorities, viz., Petruschky, Mark W. Richardson, F. Nenfeld, Chantemesse, and others, have drawn attention to the persistent presence of Eberth bacilli in the urine of persons who had recovered from typhoid fever. This phenomenon is of sufficient importance to demand the serious attention of sanitary authorities and physicians, and may serve to explain unexpected outbreaks of typhoid fever, traced to localities in which cases of that disease were not known to exist. The following instance is very instructive: Busing (*Deut. Med. Wochenschr.*, 1902, No. 25, p. 433) reports the case of a German soldier, who had contracted typhoid fever at Takou during the late Chinese war. He went into hospital October 10th, 1901, and was discharged as convalescent December 7th of the same year. Three weeks after that date he sailed for Germany. An examination of his urine showed the presence of virulent typhoid bacilli up to May 10th, 1902. This bacteriuria was not accompanied by any clinical symptoms, and the patient thought he was in good health. Busing thinks that a

typhoid patient ought not to resume his ordinary occupation until it has been proven by bacteriological tests that typhoid bacilli are not present in his urine.

J. J. C.

Ontario Medical Council Elections.—The Ontario Medical Council elections are coming on apace; but from present appearances they will not cause a great deal of excitement. In number 11 Division (Toronto, west of Yonge Street) Dr. A. A. Macdonald will again be a candidate. We trust that the Doctor, who has since his election done such good work as representative on the Council, will be returned by acclamation. There is no question about it that he has been of the greatest assistance to the profession, more especially, perhaps, in connection with Dr. Roddick's bill, recently passed, as also in committee work, and in assisting to raise the medical standard in this Province. Toronto, east of Yonge Street, will be contested by Dr. C. J. C. O. Hastings and Dr. E. E. King. Dr. Hastings has always been known as modest and retiring. He is a man with brains, and we trust his friends will recognize in him "a good thing, and push it along." As for Dr. Edmund E.—well! he can speak for himself.

The Illness of Dr. L. L. Palmer.—The profession of Toronto have felt keenly the illness of Dr. L. L. Palmer. The doctor was some weeks ago operating upon a patient in order to remove some nasal polypi, and accidentally scratched one of his fingers. The result was an attack of septicemia and severe constitutional infection. He has been under the care of Dr. Stevenson and Dr. G. A. Peters, who have done everything in their power to lessen their patient's suffering. We trust that the Doctor will recover, and before long be his genial self again.

A Further Addition to our Staff.—We are much pleased to announce that Dr. Andrew R. Gordon, of Toronto, has joined our staff, and will from this date be sub-editor of the department of Pediatrics. Our readers can confidently look forward to some good practical notes on this subject.

Three Doctors in View.—The McGill medical faculty has three men in view for the chair of hygiene rendered vacant by the death of Dr. Wyatt Johnston: Dr. Balfour, of Edinburgh, Dr. Abbott, of Philadelphia, and Dr. Westbrook, of Minneapolis.

PERSONALS.

DR. M. M. CRAWFORD, of Toronto, has been appointed a coroner for the County of York.

DR. ARTHUR SMALL has removed, with his bride, to Chicago, where they will reside in future.

CONGRATULATIONS to Drs. Watty Thompson and W. H. Alexander, both of Toronto, on their recent marriages.

DR. J. A. TEMPLE expects to move into his new handsome residence on Bloor Street West about December 20th.

WE are glad to know that Dr. James Thorburn, sr., has almost recovered from his recent prolonged illness, and is again able to be out.

DR. CHARLES O'REILLY, of the Toronto General Hospital, was elected Vice-President of the Hospital Medical Superintendents of America at a recent meeting of that Association in Philadelphia.

THE attention of our readers is called to page xvi., where they will notice that a static machine of the very latest model, belonging to the late Dr. Martin, can be picked up away below cost.

DR. A. J. HARRINGTON has moved into his handsome new house on Bathurst Street. He is, however, just as modest as ever over it all. Andrew enjoyed two weeks' shooting the latter part of last month.

DR. CRAWFORD SCADDING is the most recent addition to the army of automobilists, having lately purchased a \$1,000 auto. on the other side of the line. We understand that he took, the other day, a trip to Whitby, Ont., and made the distance in a phenomenally short time.

DR. CHARLES SHEARD lectured before the Women's Art Association on October 11th, his subject being "Education and Moral Development in Relation to Art." Dr. Sheard is truly a man of many parts—

"A wise physician skilled our wounds to heal,
Is more than armies to the public weal."

DR. G. CARVETH has decided to continue the private hospital at the corner of College and Huron Streets, started by his sister, Dr. Annie Carveth, who has since returned home. Dr. Carveth has fitted up his private wards in an up-to-date and most comfortable manner, and is prepared to take in cases from members of the profession, who desire to give their patients both home comfort and at the same time good hospital accommodation, still continuing to attend them themselves.

Items of Interest.

Polk's Medical Register.—The eighth revised edition of this well-known work is now under way, and will appear in due time. Send for descriptive circulars, and do not be deceived by imitators. Polk's Medical Register and Directory has been established sixteen years. R. L. Polk and Co., Publishers, Detroit, Mich.

Marine Hospital at Pittsburg.—Bids for a site for the Marine Hospital which Congress has authorized in Pittsburg were recently opened at the Treasury in Washington. As the maximum expenditure for site and buildings is \$125,000, most of the bids are too high for consideration. The specifications prescribed that the plot of ground should not be less than one acre or more than four acres. Surgeon-General Wyman expresses his belief in the great need of such a hospital in Pittsburg, where rivermen, having served two months or more, may be treated at the expense of the Government. Many of these men now have to be sent for treatment to the Marine Hospital at Cincinnati.

Opening of Trinity College.—At the opening of Trinity Medical College's thirty-second session Dean Geikie presided. With him on the platform were: Rev. Provost T. C. Street Macklem, LL.D., of Trinity University; Dr. Nevitt, Dean of the Women's Medical College, and Dr. Mitchell, Assistant Superintendent of the Toronto Asylum. Rev. Prof. Clark of Trinity was unable to be present. An address of welcome was given by the Dean, who spoke of the past successes of the college and the bright prospects which lay before it in the future. Rev. Provost T. C. Street Macklem, LL.D., on behalf of Trinity University, expressed its heartiest congratulations to the college on the occasion, and good wishes for a prosperous future. Prof. Geo. A. Bingham, M.D., C.M., delivered the opening lecture. After referring to the great importance of preventive medicine, he gave an historical outline of the development of medical knowledge.

Admission to the Approaching International Medical Congress.—The Paris *Semaine Medicale* for some reason is opposed to the International Congress and observes that one does not need to be much of a prophet to foresee that the approaching International Medical Congress at Madrid is already stillborn. It is not a medical congress, but a congress of physicians, druggists, dentists, veterinarians, midwives, professors of all kinds, and of all branches and journalists on the lay press. The offensive regulation in

regard to acceptable members has been given in full in these columns as also the amendment sent out in the last communication from the committee of organization—pages 90 and 716. The *Semaine* continues: "What physician, scientist or conscientious practitioner, seeing the dignity of the profession thus assailed, will consent to take part in such a congress? What truly high-class medical journal will open its columns to the report of such a heterogeneous collection of communications from men foreign to the profession?"—*Med. News*.

Physiology and the Gospel of Hustle.—From Chicago comes the proposal that the suburban dweller shall breakfast upon a trolley dining car in order that he may save the half hour (or is it only ten minutes in Chicago?) lost in breakfasting at home. By this plan the coming millionaire jumps out of bed and, boarding the trolley car, finds that his previously-ordered breakfast is ready for him, and by the time he has eaten it he is landed at his office ready for business. But the physician and the ordinary human ruminant must in amazement ask, Why have any home at all? What is the use of marriage and children, all the old-fashioned ways, and all the ridiculous old things such as health, religion, ethics, poetry, love, peace, and the rest? Why not have meals served in the office, and supply one's self with a patent desk which, at the end of the business day, by the push of a button, is transformed into a bed? If sleep is slow in coming under such circumstances, "the hypodermic man" is at the command of the telephone. When digestion fails, as it is likely to do after a few years of machine-feeding, chemistry will probably supply all foods in a predigested state, and any way by that time the "pile" will have been made. It is not added that perhaps by that time the great physiologist, Death, may have an important question to ask.—*Amer. Med.*

The Canadian Casualty Co., Limited.—During the past six weeks a number of medical men have been appointed to office as referees of the new Canadian Casualty Co., which has begun operations. It is understood that the directors of the new accident company, who are all well-known business men, have decided to enter practically every field of accident insurance, and as a result of this decision the operations of the company will be quite extensive, covering, as they will, every form of accident. Among the public men who will be on the Board, is the Honorable R. P. Roblin, M.P., Premier of Manitoba, and the daily papers the other day announced the election to the Board of Mr. H. M. Bate, of the firm of H. N. Bate & Son, Ottawa. Mr. Bate is President of the Russell Company; Vice-President of the Metropolitan Loan & Savings Society; a Director of both the Gatineau Bridge Co. and the Royal Victoria Life Assurance Company, and is Chairman of the Ottawa Improvement Commission. The Company will carry on business in boiler insurance, and under the recent legislation of the Ontario

and Manitoba Parliaments, making boiler inspection compulsory, an exceedingly profitable business for it in this line is assured. The Company has a share capital of one million dollars, and its general manager is Mr. A. G. C. Dinnick, whose offices are at 24 Adelaide Street East, of this city. The stock of the company can be commended as a safe investment, and should prove exceptionally attractive to medical men.

So-Called "Christian Science."—While it is totally incomprehensible to the practical, hard headed, common-sense individual that any one should pursue such an intangible chimera as "Christian Science" with such sublime faith as to depend upon it in the presence of serious bodily illness, certain it is that the disciples of this vicious religious monomania are increasing in number and temporal power, and that it is no longer safe to entirely ignore it as a menace to the health and well-being of the community. Both the medical and secular press have devoted considerable attention to the subject, largely in the way of ridicule, but the most powerful, logical, and altogether unanswerable argument we have yet seen is comprised in a series of short lectures by Rev. Andrew F. Underhill, of St. John's Episcopal Church, Yonkers, N.Y., entitled, "Valid Objections to So-called Christian Science." Realizing that their interests are identical with those of the medical profession, and that the enemy of one is the enemy of both, the Arlington Chemical Company is anxious to do its part in relegating this absurd cult to the limbo of oblivion, where it may rest peacefully side by side with the many foolish fads that have preceded it. Appreciating the force of the argument referred to, and being convinced that it will place in the hands of the physician a well-forged weapon wherewith to combat such a subtle and dangerous enemy, the Arlington Chemical Company has obtained the permission of the author to reprint these lectures in booklet form and distribute them to physicians. If any of our readers have been overlooked in the mailing, a request to the above Company will bring a copy.

DR. SCHOMBERG ELLIOTT, who has been absent from Toronto for some time, in the Old Land, has returned to the city and settled at 28 Grosvenor Street with his daughter.

AMONG the applicants for the chair of Medical Jurisprudence in Toronto University are: Dr. W. J. Wilson, Dr. E. Herbert Adams, Dr. John Caven, Dr. R. J. Wilson, and Dr. W. J. Greig.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY.

DEAR SIR,—The active staff of the Girls' Home were obliged to resign in a body during the past month, owing to a disagreement with the Board of Management, after repeated efforts on their part to come together. The action of the Board was such that no self-respecting medical practitioner could consent to act further under prevailing arrangements.

Members of the profession proposing to seek appointment on the home staff would act in their own as well as in the Profession's interest, if they would call upon me before accepting such appointment.

Yours very truly,

D. J. GIBB WISHART,

Senior Member of the late staff.

DEATH OF DR. BERTRAM SPENCER.

THE sudden death occurred last month of Dr. Bertram Spencer, of eight East Bloor Street. For two years Dr. Spencer has not been in robust health, the result of a severe attack of blood poisoning. An unfortunate fall while attempting to board a street car caused a deep wound on his forehead. At first the injury was not considered serious, but soon erysipelas developed and death resulted. Deceased was born in Torquay, Devon, Eng., where his father still resides. He served as a midshipman for seven years in the English navy, and at an early age came to this country and settled in Toronto. He attended what was then known as the medical faculty of Toronto University, and graduated in 1879. The following year he returned to Europe, and became a member of the Royal College of Surgeons of England. On returning to Toronto he took up practice and soon became widely known. He had a large practice. Dr. Spencer was a member of the College of Physicians and Surgeons of Ontario, and occupied the position of Professor of Medical Jurisprudence in Toronto University. He was also on the staff of the General Hospital, and a coroner. In politics he was a staunch Conservative, and he attended All Saints' Church. He was about forty-five years of age. He is survived by his widow, who is a daughter of Mr. Nichol, of Guelph. The funeral was very largely attended by the city physicians.

The Physician's Library.

BOOK REVIEWS.

Les Difformites Acquises.—De L'appareil Locomoteur. Pendant L'enfance et L'adolescence Par Le DR. E. KIRMISSON. Paris: Masson et cie., Editeurs, 1902.

In 1898, Dr. Kirmisson gave the medical world a valuable and comprehensive work on the Surgical Diseases of Congenital Origin. The present is a companion work on the Acquired Deformities of Infancy and Adolescence, and is worthy to take rank with the former.

The work divides itself naturally into four parts: 1. Deformities consequent upon osseous or articular tuberculosis; 2. Those resulting from rickets and other developmental affections of the skeleton in childhood and adolescence; 3. Deformities following and due to affections of the nervous system, such as infantile hemiplegia; 4. Deformities resulting from traumatism and inflammation, such as osteomyelitis and syphilis.

This constitutes, not only an orderly and logical scheme, but also a comprehensive one for the presentation of the subject. We have long been familiar with the fact that rickets and tuberculosis cause many of the affections which call for orthopedic treatment. But it will be a surprise to many to learn how large a percentage of remedial deformities and disabilities are consequent upon affections of the nervous system.

The work is rendered more practical and valuable because of its omissions. No attempt is made to give methods of treatment or to describe an apparatus simply to make the book historically complete. Its valuable pages have been employed for the record of such methods of treatment and such apparatus as have proved their worth by their record of success.

While the space which is permitted will not allow any detailed examination of the principles of treatment advocated, yet one can scarcely allow the opportunity to pass without commending the thoroughly modern and logical views of the author. It is a point that may well be illustrated by his recommendations for the curative treatment of scoliosis. He describes this treatment as: *a*. Carried out by braces for correcting patients' attitude; *b*. Prolonged recumbency; *c*. Orthopedic treatment by means of apparatus and exercises for correction of the deformity. The author gathers together, with a very slight exception, the best that has ever been accomplished for the treatment of these cases. The exception

referred to is found in his not attaching sufficient weight to the more improved methods of auto-suspension together with the employment of force, used at right angles to the spine while the patient is suspended. The methods of suspension which pull upon the arms, either through the hands grasping a bar, or by means of a strap passing under the shoulders, are not capable of accomplishing much good. Muscles, which pass from the vicinity of the shoulders to the pelvis, carry the weight of the pelvis and lower extremities, and do not permit the spine to bear that weight. Patients endure, without complaint, not only the weight of the body in suspension by straps passing under the chin and occiput, but will also allow a greatly increased extending force, by having dumb bells or other weights strapped to the feet. Thus suspended, patients may be allowed to swing back and forth through an arc of twenty to thirty feet with great advantage. While thus suspended, but not swinging, a girth may be made to pull at right angles to the spine with a force equal to that of the patient's weight, thus employing the strongest powers which may be employed at the greatest mechanical advantage. The writer having followed this method for several years has found no accident or ill resulting therefrom.

Quite logically the author puts his ban upon mechanical braces in the treatment of scoliosis.

No book has been published in recent times, dealing with orthopedic subjects, that is more fresh and practical than this last volume of Kermisson.

B. E. M'K.

Nothnagel's Encyclopedia of Practical Medicine—American Edition. *Diphtheria*. By WM. P. NORTHRUP, M.D., New York. *Measles, Scarlet Fever, and German Measles*. By PROFESSOR DR. TH. VON JURGENSEN, Professor of Medicine in the University of Tubingen. Edited, with additions, by Wm. P. Northrup, M.D., Professor of Pediatrics in the University and Bellevue Medical College, New York. Handsome octavo, 672 pages, illustrated, including 24 full-page plates, three of them in colors. Philadelphia and London: W. B. Saunders & Co. Canadian Agents: J. A. Carveth & Co., Toronto. 1902. Cloth, \$5.00 net; Half Morocco, \$6.00 net.

This volume is the third of the series of English translations of Nothnagel's system. It differs from the others in not being wholly a translation. The article on diphtheria has been contributed by Dr. W. P. Northrup, the editor of the volume, and takes up the first 192 pages. This departure from the rule was rendered necessary on account of an engagement entered into by the German author to publish a translation of his article separately from the series. While we cannot say, until the German author's translation is examined whether the English reader has suffered by the substitution, we can say that Dr. Northrup's article is

quite worthy of the place it has been given in the work. Dr. Northrup has, for many years, devoted much attention to the study of diphtheria, and the fact of his close association with O'Dwyer in the development of intubation lends added interest and importance to the article.

The author gives a brief history of the growth of our knowledge of the disease, and then deals exhaustively with the etiology. The Klebs-Löffler bacillus is accepted as the specific cause, and the pseudo-diphtheric bacillus is discussed at length, and the difficulty of distinguishing it freely acknowledged. Under the heading of pathology he fully considers the pathological anatomy. It would have been more correct to have so named the section. The treatment is very fully discussed. He gives a full analysis of the voluminous literature on antitoxin, and presents a strong endorsement of the efficacy of the treatment. The chapter on intubation is, of course, full and exceedingly well illustrated by skiagrams, photographs, and drawings, showing all stages in the process of introducing the tubes. The relative merits of tracheotomy and intubation are impartially discussed, especially in view of the author's large share in perfecting the latter. The remainder of the volume is contributed by Von Jurgensen on the Acute Exanthemata—scarlet fever, measles, and German measles. The translation is made by Dr. Northrup, who makes many additions to render the work more valuable to English-speaking readers. The volume is brought up to date, reference being made to literature appearing up to the end of 1901. In this brief notice two points may be referred to: First, the possibility of the occurrence of two or three of these acute diseases simultaneously in the same person; and secondly, the doubt thrown on the existence of German measles as a separate disease. The "fourth disease" is also discussed, but its individuality is left an open question. The volume is very creditable to the publishers, the print being large and clear, but it is to be regretted that the result is somewhat marred by the strong "pipe-clay" odor of the paper.

A. M'P.

A Treatise on Diseases of the Anus, Rectum, and Pelvic Colon.
By JAMES P. TUTTLE, A.M., M.D. Professor of Rectal Surgery in the New York Polyclinic Medical School and Hospital; Visiting Surgeon to the Almshouse and Workhouse Hospitals. With 8 colored plates and 338 illustrations in the text. New York: D. Appleton & Co. 1902.

This is an extensive treatise on the subject of diseases of the anus, rectum, and pelvic colon, of 961 pages. Following the method of introduction which is customary nowadays when writing a monograph, the author gives a somewhat exhaustive account of the embryology, anatomy, and physiology of the parts concerned. This does seem to us unnecessary, in view of the fact that so many

excellent descriptions are now at hand in current works on these subjects. We must commend, however, very heartily the section on malformations of the anus and rectum, which is excellent; it is a most complete summary of such abnormalities, and we have added thereto a description of the appropriate methods of treatment applicable under the individual conditions of this character which arise. The illustrations of this section, too, are well done, and form here, as they do elsewhere in the book, a most helpful guide to a clear understanding of the author's descriptions and meaning.

The chapters on such common conditions as fissure, fistula, hemorrhoids, and stricture, are well written, and will prove most valuable to the practitioner who is anxious to gain information regarding the most modern and efficacious methods of their treatment. Thus the manner of dissecting out a fistulous tract *in toto* is clearly described, and is properly advocated as a method which is clearly the ideal one in dealing with such troublesome conditions. After an exhaustive discussion of the various methods of dealing with piles, the author favors the clamp and cautery as being the most generally applicable, and speaks of it in the following terms: "On account of its applicability to all varieties, the ease and celerity with which it can be applied, and its uniformly good results, the clamp and cautery easily stands first among the operations for hemorrhoids.

In the section of prolapse of the rectum the author mentions various means which have proved useful in the various degrees of procidentia recti which occur, and we are glad to note that full reference is made to the ingenious method of dealing with such conditions which has been devised and successfully carried out by Dr. G. A. Peters. Dr. Peters' method is lucidly described and the steps of the operation indicated by two well executed wood cuts. The other sections of this work, including that on tumors and on wounds, partake of the general excellence of the whole book, which we heartily recommend as a valuable guide to the practitioner who has to do with the surgery of these regions.

The book is printed in clear type on good paper, and the plates and wood cuts are of the highest order. We therefore congratulate the publishers on their part of the work.

A. P.

The Force of Mind, or the Mental Factor in Medicine. By ALFRED T. SCHOFIELD, M.D., M.R.C.S., etc.; Hon. Physician to Friedenheim Hospital; author of "The Unconscious Mind," "The Springs of Character," etc. Philadelphia: P. Blakiston's Son & Co. Canadian Agents: Chandler Massey, Limited, Toronto and Montreal. 1902. Cloth, \$2.00.

The author examines carefully into the causes for the widespread professional apathy observed for the study of the subject

of the influence of the mind over the body. One writer whom he quotes cites the following four reasons for the unpopularity of the subject: (1) Want of instruction on the subject in medical schools. (2) The difficulty of study without teachers or textbooks. (3) The uncertainty of the utility of the knowledge when acquired. (4) The dread of being thought singular or old-fashioned. Investigations in this department of study have not kept pace with the steady advancement along those lines, which admit of practical scientific demonstration. "To talk of the patient's spirits in a case of phthisis when the bacillus swarms in the sputa, seems to savor of 'idle words.' What folly to speak of mind influences in typhoid fever when the enteric ulcer can be seen, post mortem, in the pathological theatre. We can catch and stain and double stain the microbes of many infectious diseases; what nonsense it seems, then, to talk of fear as a casual factor."

The author makes out a strong argument why the individual should be considered as an organic whole, partly physical and partly psychical, instead of being studied only as a part which always happens when the mental factor is disregarded. He then proceeds to show that, as the action of the mental factor in disease is unconscious, it cannot be recognized as mental by those who limit the mind to consciousness. The word mind must, therefore, be extended to include all psychic action. In that part of the work which deals with the action of the mind in curing disease, and the varieties of mental therapeutics, the author gives evidence of the most careful research, and, though absorbed in his subject, he is always clear and fair. Altogether, this little work of three hundred pages is full of interest to every practitioner who is anxious to understand the mental factor in disease.

N. H. B.

The International Text-Book of Surgery. In two volumes. By American and British Authors. Edited by J. COLLINS WARREN, M.D., LL.D., F.R.C.S. (Hon.), Professor of Surgery, Harvard Medical School; and A. PEARCE GOULD, M.S., F.R.C.S., of London, England. Second edition, thoroughly revised and enlarged. Vol. I.: General and Operative Surgery. Royal octavo of 965 pages, with 461 illustrations and 9 full-paged colored lithographic plates. Vol. II.: Special or Regional Surgery. Royal octavo of 1,122 pages, with 499 illustrations, and 8 full-paged colored lithographic plates. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, \$5.00 net; Sheep or Half Morocco, \$6.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

Since the first edition of "The International Text-Book of Surgery" was published, about two years ago, considerable changes have taken place in several departments of surgery, rendering it a necessity for almost rewriting the work. In no branch have

such advances been made as in Military Surgery, recent wars having taught us many important lessons. The editors of this work, which, at the time of its first appearance, received so hearty a welcome, have gone over their several departments with great care, as it is their desire to keep *The International Text-Book* ever abreast of the times, and make it a true and faithful exposition of everything that is latest and best in the art of surgery. We have gone through the chapters on Military and Naval Surgery with care, and find that the authors have brought their work in reality right down to the present day, and have given their readers the benefit of the experience gained by the many surgeons who were actively engaged in the field in South Africa. We have also been interested in the chapters devoted to the Surgery of the Spleen, a subject which has in the past been almost entirely overlooked. We are quite safe in saying that the second edition of "*The International Text-Book of Surgery*" is one of the most complete, lucid and up-to-date expositions of our present knowledge of surgery as a study, and is a work not only for practitioners, but for students as well. The adding of quite a number of half-tones and lithographic plates to the second edition adds materially to its value.

The Principles and Practice of Gynecology. For Students and Practitioners. By E. C. Dudley, A.M., M.D., Professor of Gynecology North-Western University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago; Fellow of the American Gynecological Association; Corresponding Member of the Societe Obstetricale et Gynecologique de Paris; Fellow of the British Gynecological Society; one of the founders of the *Congres Periodique International de Gynecologie et d'Obstetrique*; Ex-President of the Chicago Gynecological Society. Third edition, revised and enlarged. With 474 illustrations, of which 60 are in colors and 22 full-page plates in colors, and monochrome. Philadelphia and New York. Lea Bros. & Co. 1902.

Professor Dudley's work on gynecology is well known to the profession, as it has already passed through two editions. The third edition, like its predecessors, is eminently practical. It appears to have been carefully revised by the author. The illustrations, which are numerous, will be valuable in any case, but particularly to practitioners who have not had the opportunity of witnessing the various steps of the operations described in the text. We learn that, although a large amount of new matter has been added to the third edition, the size of the original work has not been much exceeded.

The author very fully describes an original plastic procedure to straighten the anteфлекed cervix uteri. He considers it a great

improvement on the posterior divisions of the cervix uteri introduced and practised by Marion Sims and his followers. He states "In seven cases the indication was prolonged sterility. In three of these cases normal parturition has taken place."

We accept Professor Dudley's statement, but are unable to judge of the value of this operation from experience. The Marion Sims operation gives excellent results in dysmenorrhea caused by ante flexion.

J. J. C.

The Theory and Practice of Infant Feeding, with Notes on Development. By HENRY DWIGHT CHAPIN, A.M., M.D., Professor of Diseases of Children at the New York Post-graduate Medical School and Hospital: Attending Physician to the Post-graduate Willard Parker and Riverside Hospitals: Consulting Physician to the Randall's Island Hospital. With numerous illustrations. New York: Wm. Wood & Co. 1902. Canadian Agents: The Chandler Massey Limited, Toronto and Montreal.

Some of the most difficult cases with which the medical practitioner has frequently to deal, especially during the warm months, are those of infantile disorders due very often to incorrect feeding. How many times in a day will a doctor, when he asks the mother what diet she has been giving her child, meet with the answer, "Oh, anything at all, just what is on the table"? If mothers only knew what frequently, permanent, injury they do their offspring by using so little care as to the character of the diet, humanity as a whole would be benefited. Dr. Chapin in this book appeals to his readers, not by advising certain forms of treatment for each and every ailment, but by showing "the fundamental principle of growth, nutrition and digestion and then leave it to the physician to apply those principles." One of the most instructive chapters is that dealing with Proprietary and Infant Foods. The author says in this connection, "From a nutritional standpoint, those foods by themselves are almost without exception inferior to the best grades of condensed milk. When used with cows' milk, however, many of them are effective diluents, especially those containing baked flour. In cases of indigestion, they sometimes prove helpful, but as a steady diet for an infant they should not be used unless along with a liberal amount of fresh milk. Dr. Chapin divides his work into four parts, the first dealing with the underlying principles of nutrition, part two with raw food materials, part three with practical feeding and part four is devoted to the growth and development of infants. The book is very practical and in advance of many only recently published.

Massage, and the Original Swedish Movements. By KURRE W. OSTROM. Philadelphia: P. Blakiston's Son & Co. Canadian Agents: Chandler Massey, Limited, Toronto.

This work, which in twelve years has reached its fifth edition, is written for the purpose of giving more detailed and exact direc-

tions for the performance of massage, and the various exercises which are included under the head of Swedish movements than have hitherto been found in any book published on these interesting and important subjects. Mechano-therapeutics have of late years received much attention, and no practitioner who has studied their action can doubt their exceeding value in very many forms of disease. It is a most unfortunate fact that massage has, through certain unprincipled persons, both professional and lay, suffered much discredit in the eyes of the public, and also of the profession, so that any book written to establish a useful and scientific method of treatment in disease by means of massage must warmly commend itself to the members of the medical profession. Mr. Ostrom's book must go a long way towards reinstating massage in its proper place, as one of the best means towards certain ends, when used with due precaution and scientific knowledge of its action in modifying diseased conditions. The illustrations are very numerous and good, giving great assistance to the correct understanding of the text. It is to be hoped that a great number of medical men may be found sufficiently interested in these subjects to read this book, and to give a fair trial to the principles contained in its pages. We congratulate Mr. Ostrom upon his good work, and wish him success in his efforts to place massage and similar therapeutical measures upon a higher and more scientific basis.

J. H. L.

The Practical Medicine Series of Year-Books. Comprising ten volumes on the year's progress in Medicine and Surgery. Issued monthly. Under the general editorial charge of GUSTAVUS P. HEAL, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume VII.: *Materia Medica and Therapeutics, Preventive Medicine, Climatology, Forensic Medicine.* Edited by Geo. T. Butler, Ph.G., M.D., Henry F. Favill, A.B., M.D., Norman Bridge, A.M., M.D., and Harold M. Moyer, M.D. Pp. 270. June, 1902. Cloth, \$1.50. Volume VIII.: *Pediatrics and Orthopedic Surgery.* Edited by W. S. Christopher, M.D., John Ridlon, A.M., M.D., and Samuel J. Walker, A.B., M.D. Pp. 231. July, 1902. Price, \$1.25. Volume IX.: *Anatomy, Physiology, Pathology, and Bacteriology. Pathology,* Edited by W. A. Evans, M.D., M.S., Professor of Pathology, College of Physicians and Surgeons, Chicago. *Bacteriology,* edited by Adolph Gehrmann, M.D., Professor of Bacteriology, College of Physicians and Surgeons, Chicago. Pp. 212. August, 1902. Price, \$1.25. Chicago: The Year-Book Publishers, 40 Dearborn Street.

The present volumes are fully up to the high standard of the earlier issues. The selections have been judiciously made, and give one a good resume of the year's work. The selections in

Volume VIII. deserve especial mention, on Heredity, Nutrition, and Infections. In the section on Orthopedic Surgery there are several good plates from Goldthwait's and Freiberg's articles. One hundred and forty-five pages of Volume VII. are devoted to Therapeutics. In Preventive Medicine, Tuberculosis takes a prominent place. In Volume IX. the selections are short and well arranged. This volume covers a very large field, and will be found especially interesting to the Pathologist and Bacteriologist.

W. J. W.

The Diseases of Infancy and Childhood. Designed for the use of Students and Practitioners of Medicine. By HENRY KOWLIK, M.D., Attending Physician to the Mount Sinai Hospital; formerly Attending Physician to the Good Samaritan Dispensary, New York; Ex-President of the American Pediatric Society; Member of the Association of American Physicians and of the New York Academy of Medicine. Illustrated with 169 engravings and 30 plates in colors and monochrome. New York and Philadelphia: Lea Brothers & Co. 1902.

The above is a late addition to the literature on Pediatrics—a field of medicine more carefully tilled of late—a volume of 675 pages, nicely bound and of good material.

While literature from many tongues has been utilized, the work is evidently, as the author says in his preface, based upon his individual experience, a decided recommendation. It is anything but verbose; it is concise, and perhaps a little dogmatic, not a bad fault, especially on the subject of treatment. The arrangement of the book is excellent, with a very complete table of contents, and a carefully prepared index. The study of the diseases of the Gastro-Enteric Tract is, in our mind, open to criticism, especially in the matter of nomenclature and tendency to view these conditions from a symptomatic standpoint, rather than from that of analytical study of physiological and pathological conditions.

The work is fresh, and you feel it to be intensely practical and of excellent merit, and bears the stamp of clinical work.

A. R. G.

Encyclopedia Medica. Under the general editorship of CHALMERS WATSON, M.B., F.R.C.P.E. Volume XI.: Pp. 530. Sciatica to Syncope. Edinburgh: William Green & Sons. 1902.

This volume contains several articles of merit, though none are of special excellence, and a few are, unfortunately, rather disappointing. In several instances there is too much condensation for the articles to be either reliable for reference or interesting to read. These remarks are especially applicable to the section on diseases of the stomach and duodenum, which is condensed into sixty pages. The wisdom of attempting so much in such limited

space is questionable. In the literature at the end of the section with one exception, the references are confined to British authors, the much better work done on this continent and in Germany being quite ignored.

The article on Small-pox by E. W. Hope is well illustrated, and should carry conviction to the antivaccinationists. The free distribution of the illustrations should be the best aid to securing universal vaccination. James S. Collier's article on the spinal cord is excellent, especially in view of its brevity, as is also that by a H. Tubby, on the Surgical Affections of the Cord and Spine. He does not regard lumbar puncture with much favor, as it is so unreliable, a view quite in accord with experiences of the reviewer, who obtained sterile fluid in four cases of cerebro-spinal meningitis, the diagnosis being proved by autopsy in two of them. While this volume is not up to the standard of its predecessors, yet many of the articles are good, and the volume as a whole will be found useful for reference.

A. M'P.

A Text-Book of Materia Medica, Therapeutics, and Pharmacology. By GEORGE FRANK BUTLER, Ph.G., M.D., Professor of Materia Medica and Therapeutics in the College of Physicians and Surgeons, Chicago; Medical Department of the University of Illinois; Medical Superintendent of Alma Sanitarium, Alma, Michigan; Member of the American Medical Association, Illinois State Medical Society, Chicago Medical Society, Chicago Pathological Society, and Chicago Society of Internal Medicine; Fellow of the Chicago Academy of Medicine, etc. Fourth edition, thoroughly revised. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, \$4.00 net; Sheep or Half Morocco, \$5.00 net. Canadian Agents: J. A. Carveth & Co., Toronto, Ont.

We have found the third edition of Dr. Butler's work a useful and instructive work of reference, particularly in matters relating to certain drugs, viz., the newer synthetics. We notice with pleasure that, in the fourth edition, the chapters on organotherapy, and serum-therapy, have been considerably enlarged and revised.

It is a well written, concise text-book, suitable for students of medicine and also adapted to the requirements of the practitioner as well.

J. J. C.

Small-pox: How it is Spread and How it may be Prevented.

Drawn from the facts of the Warrington Small-pox Epidemic of 1892-93. By JAMES WALLACE, M.A., M.D., Aberdeen. London: Henry J. Glaiser, 57 Wigmore Street, Cavendish Sq. W. 1902.

In any attempt to combat the ravages of a disease like small-pox, it is of the greatest value and the most reliable and safe guide

to have data and statistics of previous outbreaks before us, that everyone may be allowed to judge for himself upon these premises. The author of this book has carried out this idea, and has laid before his readers a full description of the investigation in all its bearings of the epidemic which occurred in Warrington in 1892-93, and concerning which Dr. T. D. Savill, as Medical Officer of the Royal Commission, reported most completely. This is a most valuable condensed history of the information given in the report of the Royal Commission, and is a work which to anyone interested in this subject cannot fail to be of value. A. J. J.

The Diseases of Infancy and Childhood. For the use of students and practitioners of medicine. By J. EMMETT HOLT, M.D., LL.D., Professor of Diseases of Children in the College of Physicians and Surgeons (Columbia University), New York; Attending Physician to the Babies' and Foundling Hospitals, New York; Consulting Physician to the New York Infant Asylum, Lying-In Hospital, Orthopedic, and Hospital for the Ruptured and Crippled. With 225 illustrations, including 9 colored plates. Second edition, revised and enlarged. New York: D. Appleton & Co. 1902.

Holt's "Diseases of Children" is a book known to nearly all practitioners of medicine, and certainly to all of those who take special interest in Pediatrics. It has been always looked upon as a really scientific work, and one to be safely consulted on any branch of infantile disease. It can be said of Holt what cannot be said of some other books on diseases of children, *e.g.*, that it is practical, and, what is very important, has been written for the every-day use of the busy practitioner. The second edition brings the volume up to a very high standard, having been to a large extent rewritten. The chapters on milk and infant-feeding, a subject which of late years has come to the front so much, are full of interest, thoroughly practical, and alone are worth the price of the entire book.

The Medical Students' Manual of Chemistry. By R. A. WITTMERS, A.M., M.D., Professor of Chemistry, Physics, and Toxicology in Cornell University Medical College, New York. Fifth Edition. New York: William Wood & Co. 1902. Canadian Agents: The Chandler-Massey, Limited, Toronto.

The present edition of this standard text-book contains several improvements on former editions. Less space is devoted to the details of technical processes, and more is given to a consideration of the general principles upon which the science of chemistry is based. More space than formerly is also given to physiological chemistry. This is a decided improvement. In the past too much of the medical student's time has been devoted to the study

of mineral chemistry, and far too little to the consideration of the composition of the more important fluids of the body, and the nature of the chemical changes which occur in those fluids.

The publishers have done their part well. The book has a neat appearance, and is well printed. This edition is sure to be even more popular than its predecessors.

A. E.

A Manual of Practical Anatomy. By the late PROF. ALFRED W. HUGHES, M.B., C.M. Edin., F.R.C.S. Edin.; F.R.C.S. England; Professor of Anatomy King's College, London; Examiner in Anatomy Royal College of Surgeons, England; Examiner in Anatomy University College of South Wales. Edited and completed by ARTHUR KEITH, M.D., Aberdeen, F.R.C.S. England; Lecturer on Anatomy London Hospital Medical College; formerly Hunterian Professor Royal College of Surgeons of England. In three parts. Part III.: The Head, Neck, and Central Nervous System; illustrated by 12 colored plates and 204 figures in the text. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1902. Canadian Agents: The Chandler Massey, Limited, Toronto and Montreal.

Part III., devoted as it is to the Head, Neck, and Central Nervous System, is fully up to the preceding volumes, if it does not in some ways surpass them. The different plates, in colors, of the dissections of the neck, as also those of the interior of the brain, are among the best we have seen in any work. Dr. Hughes' Manual of Practical Anatomy is without doubt a valuable contribution to the literature upon this subject, and should be found of great use, especially to those who are teachers in the dissecting-rooms of our colleges.

International Clinics. A Quarterly of Illustrated Clinical Lectures and especially prepared articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose, and Throat, and other topics of interest to students and practitioners; by leading members of the medical profession throughout the world. Vol. II. Twelfth Series. Philadelphia: J. P. Lippincott & Co. Canadian Agent: Charles Roberts, 593a Cadieux Street, Montreal.

This volume is an improvement upon the first, which was issued some little time ago. It contains articles by four men living in the British Isles, ten on the Continent of Europe, and eleven in the United States. Many of these articles are unusually good, being written by thoroughly good men, and containing very valuable material. The illustrations are very well got up, and are very interesting, particularly those in a paper by Dr. Kelly, of Johns

Hopkins, on "Nephrectomy." The biographical sketch of eminent living physicians, by Dr. Hinsdale, is devoted to a description of the daily life of Dr. John B. Murphy, of Chicago, whom we all know so well by reputation.

A. J. J.

The Diseases of the Throat, Nose, and Ear. By CHARLES P. GRAYSON, M.A., M.D., Lecturer on Laryngology and Rhinology in the Medical Department of the University of Pennsylvania; Physician in charge of the Department for Diseases of the Nose and Throat in the Hospital of the University of Pennsylvania. Philadelphia and New York: Lea Brothers & Co. 1902.

There has, in the last few years, been such a flood of books on diseases of the throat, nose, and ear, and many of such excellence, that it seemed impossible for any new book on the subject to have sufficient merit to justify its appearance. Yet I am confident that anyone who reads it will agree with me that he has found a book worth having. For good common sense, conciseness, and easiness of reading it has but one rival, and that an English work, McBride. This book pleases me, and will, I believe, please you.

J. M. M.

The Principles and Practice of Bandaging. By GWILYM G. DAVIS, M.D. Philadelphia: P. Blakiston's Son & Co. Canadian Agents: Chandler Massey, Limited, Toronto.

This little manual on the principles of bandaging is written for the use of students and beginners in the study of medicine, and also those entirely uninstructed in that profession. The language employed in describing the various applications of the bandage is completely free from technical terms, and can be understood by the merest beginner. Naturally, in a work of this description there can be nothing very new or original, but the instructions given for the use of the roller bandage, the tailed bandages or slings, and the handkerchief bandages, are all that can be desired, and must prove a reliable and useful guide to all anxious to acquire skill in neat and effective bandaging. The book is well illustrated from original drawings by the author.

J. H. L.

Cramer's Manual on Negative Making. The Cramer Dry Plate Co. (Ltd.), St. Louis, Mo. Eastern Depot, 32 East 10th Street, New York.

It will pay any physician, who is interested in photography, to send for a copy of this manual, as it is full of interest. The G. Cramer Co. will gladly send it for the asking, and there are thousands of medical men who are camera fiends and who would find many a useful hint within its pages.

Selected Articles.

LOCAL TREATMENT OF CHRONIC GASTRIC CATARRH— A CLINICAL LECTURE.

BY J. M. G. CARTER, M.D., Sc.D., Ph.D.,

Professor of Clinical and Preventive Medicine in the College of Physicians and Surgeons, Chicago;
Fellow of the American Academy of Medicine, etc.

Local treatment may be applied in any stage of chronic gastric catarrh; but it must be varied somewhat in the different stages. The grade of inflammation, its character and persistence, likewise may require some modification of the treatment.

First stage.—During the incipency of chronic gastritis, local treatment is not so essential, except in bacterial cases, but is beneficial. It serves to modify the congestion when that is increased, and often allays dyspeptic symptoms even when they are more marked than usual. The use of warm water (105°) with bicarbonate of sodium (3 per cent.) for washing out the stomach is frequently very valuable to remove the tenacious mucus usually adhering to the gastric mucous membrane, in this condition, and interfering with the proper mixing of peptic fluid with the food. The patient may drink a glassful of the solution before meals, or it may be introduced into the stomach through the tube. If the tube is used, the stomach should be filled before allowing any reflow. The cold douche with water at 80 to 60 degrees is sometimes more grateful and helpful than the hot douche (110 to 125 degrees). A continuous effect may be secured by using a double tube and permitting the inflow and outflow to progress simultaneously; but care should be taken to keep the stomach distended sufficiently to have the solution come in contact with the entire gastric surface. The soda solution dissolves the mucus and the stream washes it away. Weak soap-suds may be used with the tube for the same purpose. More satisfactory in many instances is the use of a solution of hydrozone. A glassful (fl $\frac{3}{4}$ iii.) of a two or three per cent. solution may be given half an hour before meals. If used as a douche with the tube a 5 or 6 per cent. solution is not too strong, and two quarts the minimum amount. These douchings may be given one to six or seven times a week, according to the requirements of the case, and are frequently all the treatment this stage of chronic gastritis demands, except what changes are necessary in the diet.

Second stage.—The inflammatory process is fully developed in the second stage, and while there may be weeks or months when there is little if any suffering, the treatment should be persistent. The cleansing of the gastric mucous membrane must be systematic and thorough. This is best accomplished with a solution of green soap or a 5 or 8 per cent. solution of hydrozone, introduced with the double tube. After first filling the stomach, inflowing and outflowing streams ought to remain about equal or the outflow may exceed the inflow, the distention of the stomach may be maintained by retarding the reflow when necessary. This process can be beneficially accomplished by driving the solution into the stomach under increased air pressure; but when the proper apparatus for this method is not at hand the siphoning method with the single tube does very well. For home treatment, or when the tube cannot for any reason be used, a solution may be made for drinking. For this purpose a 2 or 3 per cent. solution of hydrozone is prepared. The patient may take a glassful (8 oz.) half an hour before meal time. He should lie down at once, remain five minutes on the back, then turn on the right side where he must remain during the remainder of the half hour. While the patient is on the back the solution comes in contact with every portion of the gastric mucous membrane, and turning to the right side facilitates the emptying of the stomach. By this process the offending mucus is dissolved and carried away, and the organ is put into a proper condition to digest food. The use of hydrozone has the additional advantage of checking the growth of the bacteria, and probably exhibits greater antiseptic properties than any other agent that can be used in the stomach with the same degree of safety. In obstinate cases this cleansing ought to precede every meal.

After the stomach is cleansed it should be treated with soothing, stimulating, and healing applications. There are many preparations which can be so used, some of the best of which are glycerole of bismuth and eucalyptol, the essential oils, and glycozone. Boric acid in 2 or 3 per cent. solution as a wash with the tube is sometimes very valuable. The other agents mentioned may be used with a nebulizer, by means of which a vapor impregnated with the medicines can be passed into the stomach through a tube, the double tube being preferable. If it is not convenient to use a nebulizing apparatus, the glycerole mentioned, and especially glycozone, may be administered by the mouth. In many cases, in fact the latter mode of administering these agents is more desirable. These remedies encourage healing, and materially enhance the patient's prospects of recovery. This is especially true in bacterial cases. When hydrozone has been given before meals, as already suggested for cleansing purposes, glycozone may be administered in teaspoonful doses after meals with very satisfac-

tory results. This line of treatment is frequently so successful that cases are temporarily relieved and possibly often a cure effected, particularly if the general treatment has been judiciously carried out.

If, for any reason, glycozone cannot be employed, the essential oils may be used. The oils of anise, peppermint, cubebs, and tar may be combined and used with a nebulizer as previously suggested. Although benefit may be derived from the administration of this combination, I prefer glycozone treatment. The use of hot water, 120 degrees or more, and the employment of cold water, 80 to 40 degrees F., may give very happy results in certain severe cases.

Third stage.—The condition referred to here is one of atrophy. The functions of absorption and motion may be fairly well performed. The chief difficulty, then, is with the digestion of proteids. The local treatment has two objects mainly, although a third is sometimes in mind. The first object is the removal of debris and foreign material. The second is the cleansing of the mucous membrane and the destruction of micro-organisms and their removal, in order that the intestines may not receive bacterial products from the stomach. The third object sometimes kept in view in the local treatment by douching is a degree of stimulation of the functions of motion and absorption and the tonic effect to the gastric walls which follow those washings. The first object is accomplished by the use of sterilized water or a 3 per cent. solution of sodium bicarbonate. Either tube may be used. The second object is effected by douching the walls with a green soap solution or a solution of hydrozone. The latter agent in 5 per cent. solution, as directed above, gives very pleasing results. The third object may be secured by using hot or cold water for the douche.—*American Therapist*.

100 State Street, Chicago.

SEPTICEMIA AND THE CURETTE

BY H. PLYMPTON, M.D.

To attempt to break up an old-established custom in any line of life is at best a thankless job, and one likely to call down harsh criticism upon the head of the daring iconoclast.

To attempt to uproot old prejudices existing in favor of a certain line of practice in surgery, and diametrically oppose such practice, is to invite from some adverse criticism of the harshest kind. The only recompense for this is a logical refutation of, or concurrence in, the argument advanced, on the part of other members of the profession.

This latter is what I hoped for, and if I provoke a discussion, or start a line of thought in the minds of half of the readers of this article, I shall have achieved all I started out to do.

Curetting the uterus to remove fragments of after-birth or other debris has been taught in our medical schools from time immemorial, and it is firmly fixed in the receptive and retentive mind of every medical student that the first move following any such abnormal uterine condition, is to cleanse the uterus by means of the curette.

That the organ should be thoroughly and aseptically cleansed admits of no argument, but that the work should be done with the curette I deny most emphatically.

The majority of cases of death following the decomposition of fetus or placenta in utero, are caused by the use of the curette, and I hold that septicemia may be avoided if a more rational procedure be resorted to.

The condition of the uterus containing septic matter is one of great congestion; the thickened walls being coated internally and over the os with a thick, brown, tenacious mucus.

The congestion is active, and therefore the more dangerous in the event of the admission of septic matter into the circulation.

If the curette is used, denuding the walls of their protective covering, an immediate vaccination takes place with a septic virus, septicemia following in an incredibly short space of time (chemical metamorphosis is marvellously rapid in the circulatory system) and death quickly ensues.

If without using the curette we can remove the septic matter from the uterus without disturbing the mucus covering, and enable the uterus of itself to expel the coating, we shall have taken a long step forward in the treatment of this class of uterine cases.

The uterus, by reason of its congestion, may be made to perform a self-cleansing act by exciting the exudation of the serum of the blood into its cavity, thereby washing itself out, and expelling all septic matter instead of absorbing it.

This process of exosmosis is induced by a properly combined alkaline solution at a temperature above 100 degrees, and a strict avoidance of bichloride, carbolic acid, formaldehyd, or any antiseptic of an acid reaction or astringent nature, which would coagulate the fibrine and albumen of the blood. My method of procedure is as follows:

First, the gentle removal of whatever fragments are lying in the uterine cavity, by means of forceps, care being taken not to tear from the walls any adherent piece.

Second, the gentle flushing of the uterine cavity with the alkaline solution (110 degrees), the reservoir containing the fluid being not more than two feet above the level of the hips.

If the flushing could be continuously administered for a few

hours (say two or three), the conditions would be more speedily reduced to normal, but the discomfort of the position of the patient (on a douche pan) prevents this, and a flushing once every two hours with one quart of solution is about the limit of treatment.

For flushing the uterus, I use a small dilating uterine douche, and as there is plenty of room for the escape of fluid and fragments there is no danger of fallopian colic or salpingitis.

The first flushing is frequently followed by contractile pains, and expulsion of any previously adherent pieces, together with much of the mucus. A tablet of—

Ext. Cannabis Indica.....	gr. $\frac{1}{4}$
Ext. Ergotin.....	gr. $\frac{1}{2}$

every hour till desired effect is produced will contract uterus and alleviate pain.

The bowels should be moved freely, both by enema and catharsis. During the interval between douches, the patient should be kept on her back, with the hips sufficiently raised to permit the retention in the vagina of as much of the alkaline solution as it will hold.

The rapidity with which this treatment will reduce temperature, relieve pain, stop vomiting, and remove offensive odor, is marvellous to one who has not tried it. Sometimes two flushings are sufficient to cleanse the uterus thoroughly, vaginal douches being all that are needed subsequently to complete the work.

Uterine congestion is speedily relieved, and the uterine discharge changes from brown, thick, bad-smelling mucus, to a thin, transparent one, accompanied or followed by more or less of a flow of blood.

A reduction in the frequency of the flushings is desirable as soon as a tendency to return to normal conditions begins to be observed, as it frequently will within twenty-four hours. Then simple vaginal douches every three hours, with an occasional uterine flushing, if symptoms indicate it.

The action of exosmosis (and endosmosis, for there is every reason to believe in the absorption of some of the fluid) is what is desired to relieve the existing congestion, as in a bronchitis, pneumonia, congestion of kidney, congestion of any mucous membrane, etc., and is the most rational means of restoring to normal condition.

I do not wish to be understood as deservng the use of that most valuable instrument, the eurette, but only the abuse of it, to wit: Its employment under such conditions as make it practically a sharp weapon loaded with septic matter, dangerous beyond the poisoned arrow of the Malay, or the fang of the cobra, and utterly opposed to our modern ideas of antiseptis.

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GOUT AND ITS TREATMENT.

THE *Therapeutic Gazette* says: "There is no class of disease of which we know so little in respect to their etiology and pathology as those which are classed as diathetic, or in other words, dependent upon some disorder in the nutritional processes which we call metabolism. Because of this ignorance, the use of all our remedial measures for this class of cases is to a great extent empirical and unsatisfactory, and the exhaustive studies of the last few years made by Garrod, Haig, Luff, and others, while seeming to promise far more satisfactory knowledge of these diseases, have not advanced as far as the practical clinician and therapist desires. That the disease, gout, does depend upon faulty metabolism, and that as a result of this fault uric acid is formed in the body in excess, is proved, but the causes of the faulty metabolism are undiscovered, and therefore our methods are chiefly devoted, aside from diet, to its relief rather than the cure of the malady. It is not our intention at this time to attempt to discuss the very important question of the pathology or pathogeny of gout; on the one hand we find the nervous origin urged, and on the other that an accumulation of uric acid is the factor to be combated. Much of Haig's suggestive work, however, is based on hypotheses which do not seem to us to be founded upon fact, and certain of his experiments, accurate in themselves, are equally hypothetical in origin. If, as he claims, uric acid in excess is the cause of the attacks of gout, we should have, theoretically, a most sovereign remedy in salicylic acid, but as a matter of fact it very often fails, and a decision to its anti-gout powers is to be sought, therefore, more in clinical observation than in experiment.

"About this point opinions differ most essentially, some clinicians asserting that the salicylates are most efficient, and others teaching that they are futile. Thus Germain, See, and Jaccoud believe them superior to colchicum, whereas Sir Dyce Duckworth, Barelay, Ebstein, and Lecorché, believes the salicylates less valuable. It is evident at once in studying this matter that we must divide it into two parts, namely, as to the value of the salicylates in the acute attack, and as a remedy for the condition between the attacks and for the cause of the attack. In respect to the attack, Duckworth reports that he has tried sodium salicylate in a considerable number of cases of acute gout, and finds it very inferior to colchicum. He has, however, seen it do great good in a few cases in which colchicum failed, but he cannot predicate which will be benefited. Ebstein thinks that under the salicylate treatment the manifestations of the attack simply shift from joint to joint. Lecorché asserts that while salicylate of sodium often

relieves the pain of gout it does not shorten the attack, nor does it prevent subsequent attacks, although he asserts that its use in full doses of one to one and one-half drachms, increases the elimination of uric acid in the urine, and Henry Soullier asserts that the salicylates are the best remedies if the kidneys are intact."

Many medical men have expressed themselves very favorably indeed as to the therapeutic action of Vichy (Celestins) water taken regularly, not only during, but subsequent to the attack of gout. This natural alkaline water undoubtedly acts as an eliminant of uric acid from the blood, and has been pronounced by many as having almost curative properties. It has to be taken regularly, however, to have any permanent effect. Care should be used that patients get the genuine article in bottles, not syphons.

The following formulæ have also been recommended:

R	Quin. sulph.	5 j
	Syrup. simplicis }	
	Syr. aurantii flor. }	5 ij
	Acid. citric.	5 ij
	Aquæ destil.	5 vj
M.	Sig.—Ten drops in an ounce of water, to which are added twenty grains of bicarbonate of sodium, to be taken while effervescing.	
R	Tincture colchici seminis.	M. xv
	Magnesii carbonatis.	gr. vj
	Magnesii sulphatis.	ss
	Aquæ menthæ piperita.	q. s. ad 5 j
	Fiat haustus. Sig.—Repeat according to circumstances.	

EXPERIMENTS WITH ADRENALIN.

ELSBERG, in American Medicine, gives a very comprehensive report of a series of experiments with adrenalin chlorid as an addition to solutions for local anesthesia. He says: "Adrenalin chlorid, which is the active blood-pressure raising principle of the suprarenal gland recently discovered and investigated by Dr. Takamine, is now on the market as an amorphous crystalline powder, or in the form of a 1-1000 solution. It is a powerful astringent, so that a drop of a 1-10,000 solution will blanch the conjunctiva in from 30 to 60 seconds.

"Elsberg has been carrying on a series of experiments with this new drug, and finds that if a drop of a 1-1000 solution be injected under the normal skin, a slight burning sensation is felt, but no anesthesia occurs. Within one minute an area of skin about two inches in diameter becomes blanched, and almost bloodless, and remains so from six to twelve hours. The same effect will be observed if a 1-5000 to 1-15,000 solution be used, but with these weaker solutions the blanching appears only after a few minutes and disappears after three to six hours. After the

blanching of the skin disappears the tissue apparently returns to its normal condition. No deleterious effects, such as sloughing or subcutaneous ecchymosis ever followed these injections. In the course of the investigations cocain and eucain solutions, containing adrenalin in the proportion of 1-5000 to 1-20,000 were used. It was found that the anesthetic properties of the cocain and eucain were preserved, while the adrenalin caused the same blanching of the tissues as previously observed, which extended one to two inches beyond the area infiltrated.

"In performing minor operations under cocain, to which 1-5000 to 1-20,000 adrenalin had been added, only the larger vessels bled when cut across. The smaller vessels were contracted so tightly that no blood could escape from them, and therefore there was no oozing. It was unnecessary to sponge off the wound a single time during an operation. The healing of the wound was not interfered with in any way. Upon theoretical grounds it was expected that secondary hemorrhage would take place in from three to twelve hours, as the effect of the drug passed off. This, however, has not been the case in the thirty cases operated upon. Experience with the drug is still small, and what will be the result in operations upon larger wounds remains to be determined.

"For small operations the addition of adrenalin chlorid is of distinct advantage, in that it raises the blood-pressure and overcomes the depressing effect of the cocain, at the same time it entirely does away with the oozing of blood from the wound."

In genito-urinary work the writer has used adrenalin. It checks hemorrhage, but in several cases it was followed by secondary hemorrhage, rather free. Its use is now limited to circumcision in very young infants, and it is there applied in very weak solution when the open method is used.

PHYSICAL CULTURE AND REMEDIAL TRAINING.

Miss Phipps (niece of Miss Chreiman, London, England), has opened, at the corner of Spadina Avenue and College Streets, Toronto, a School of Physical Culture and Remedial Training, and has the pleasure to invite the kind co-operation and advice of members of the profession of medicine, and all other residents who are interested in making health understood as the only natural and right condition of existence.

Miss Phipps has been upon Miss Chreiman's staff for several years, taking finally entire direction of the practical work of the Hygienic Exercise Classes, also of the dancing as taught by Miss Chreiman's teachers.

Miss Chreiman will, if possible, be with Miss Phipps, and very

pleased to give any information that may be desired. Miss Chreiman was a founder in England of much of the work now well-known on both sides of the Atlantic, as may be seen by the following extracts:

"The excellent system of gymnastics for girls, recently established by a lady (Miss Chreimen) in various parts of London, is all that can be desired. . . . With half the care which mothers spend in dressing and decking-out their children, often in unsuitable clothing, they might, with a little help from their medical advisers, prevent most of the deformities which mar the physical beauty, comfort, and health of their offsprings; and no time seems more appropriate than the present for directing the attention of medical practitioners, and through them of parents, to the means of attaining these objects."—*The Lancet*, Sept. 16th, 1902.

"We have no doubt that the system elaborated by Miss Chreiman is of great use in developing the muscular and respiratory systems of growing children; and not only so, but in encouraging a grace of pose and movement which the art of the *costumiere* can never impart. We were forcibly reminded of the well-known words of Pope, as we watched the evolutions of the class. 'True ease,' he says, 'comes from art, no chance, as those move easiest who have learnt to dance.' In the days of Queen Anne dancing was perhaps the nearest obtainable approach to 'scientific gymnastic exercises.' Dancing then did not consist in turning round on the tips of the toes a greater or less number of times in the minute, but was an exercise for the public performance of which much serious and private practice of complex manœuvres and attitudes, calling into play a great variety of muscles, was necessary."—*London Medical Journal*.

"A most interesting demonstration of gymnastics for girls—by the pupils of Miss Chreiman's classes—was given on the 5th inst. at the Town Hall, Kensington, under the auspices of the National Health Society. Lord Brabazon was in the chair, and a very large assemblage of members of the society and their friends were present. Various exercises, gymnastic dances and vocal marches were gone through with great precision and grace by the young athletes, and Lord Brabazon expressed a wish that such training could be extended to School Board children. Dr. Farquharson, M.P., W. Woodall, Esq., M.P., and others, addressed the meeting; letters were read, expressing sympathy with the endeavor to physically educate and develop our growing girls—the future wives and mothers of England."—*The Medical Times*.

EXHIBITS OF PHARMACEUTICALS, ETC., AT THE CANADIAN MEDICAL ASSOCIATION CONVENTION
AT MONTREAL.

Chandler & Massey, Limited, Toronto and Montreal.—

Chandler & Massey, Limited, had a magnificent exhibit at the Montreal meeting, comprising most of their numerous lines. A beautiful instrument cabinet of their own manufacture, filled with a complete line of instruments, formed one of the most attractive features of this exhibit.

Another attraction, much admired, particularly by hospital surgeons, was one of their improved invalid and fracture beds, finished in nickel. As the late Mr. Lawson Tait observed, "There is no article in ordinary life-long use with which we are so closely related, with which we spend so much of our time, which we occupy with such affectionate readiness, and leave with such affectionate regret, as our bed." And with the Chandler & Massey bed the construction is such that the patient can be afforded every possible comfort in the way of position and conveniences. Microscopes, microscopical goods, dressings, and ligatures were also arranged tastily and with the view of attracting the physician. A section which seemed to draw a great number of physicians, surgeons, and students, was the book counter, where one found the very latest in medical literature. The exhibit was in charge of Mr. A. P. Watts, of the Toronto House.

H. K. Wampole & Co.—It was said of the recent meeting of the Canadian Medical Association, which convened in Montreal a few weeks ago, that it surpassed, in point of attendance and interest, any previous one. The same may be said of exhibits made by the manufacturing pharmacists. Prominently among these was the very large and attractive display made by Henry K. Wampole & Company. This exhibit was so arranged as to show in detail their well-known special preparations, also their very comprehensive line of pharmaceutical products, including Pulverous Pills, Compressed Tablets, and Tablet Triturates, Chocolate Coated Tablets, Dispensary and Hypodermic Tablets, Granular Effervescent Salts, Soluble Medicated Bougies, and Elastic Gelatin Capsules, Medicinal Elixirs, Syrups, Wines, and Solutions, also Fluid Extracts, and Effervescent Lithium Citrate Tablets.

The most recent production from the laboratory of this firm in Toronto is that of Hydrogen Peroxide (ozogen) which made a specially bright showing in its four sizes. This should be of

interest to the medical profession, since it has all the qualifications required by the pharmacopeia. The commercial advantage of being manufactured in Canada (thus avoiding increased price by reason of duty) should also be another recommendation in favor of this product.

The beauty and largeness of this exhibit gave evidence of the magnitude of the very largely increasing business of Messrs. Henry K. Wampole & Company, in the Dominion of Canada.

Deimel Linen Mesh.—The Deimel Linen exhibit was in the most prominent part of the Hall. It was draped with the Dr. Deimel Linen-Mesh, winter and summer weights, from the ceiling down to the counters and to the floor. Even the sign of the firm, nine feet long, was made of Dr. Deimel's linen mesh, the letters being cut out of heavy, unbleached linen-mesh towelling, were laid upon a background of snowy white linen-mesh of which the Dr. Deimel underwear is made. The exhibit consisted of the following articles: Dr. Deimel's linen-mesh Abdominal Supporters; Dr. Deimel's linen-mesh Suspensories; Dr. Deimel's linen-mesh Dressings in Lee's Breakable Tubes, in glass box jars, and in air-tight cartons, and the Dr. Deimel underwear garments. Mr. Francis Deimel, the manager, is to be congratulated upon the attractive exhibit made at the Canadian Medical Association meeting.

Radnor Water Exhibit.—In one corner of the exhibit hall, under the charge of Mr. J. B. Giles, was an exhibit of Radnor Water, where registering physicians were courteously treated to frequent and copious libations of this popular mineral water. Of Radnor, the *Medical Press and Circular*, of London, says: "Radnor is a pure, natural mineral water, of an agreeable taste, and mixes well with the most delicate wines. From the point of view of organic purity it leaves nothing to be desired."

Charles E. Frosst & Co., of Montreal, showed their different pharmaceuticals arranged on shelves tier above tier, in a manner that attracted comment from the visitors. The goods this firm are pushing most now include Pinocodeine (Frosst), Elixir Digitalin Co. (Frosst), Ferrogen (Frosst), compressed tablets of Urotropin, 7 1-2 grs. each, granular effervescent Urotropin, Heroin, Salol and Lithia, and combinations

Gilmour Bros. & Co. had a very "tasty" stall, on which was arranged their different pharmaceutical preparations, including

Johnson & Johnson's plasters and absorbent cottons, Mercauro and Arsenauero, as made by Roome, Parmele & Co., Horlick's food, which they served up to the visitors in the form of ice cream, as also several other preparations well known to the profession.

The Lindman Truss.—At the top of the hall, a good-looking gentleman of no mean proportions was to be seen, no less a personage than Bernard Lindman, of truss renown. Lindman banks all on his truss, and no wonder, as it is a good one, and has given satisfaction almost wherever used.

J. A. Carveth & Co., of Toronto, had a large display of W. B. Saunders & Co.'s books, the interests of the firm being looked after by Mr. McFadyen.

HYDRO-THERAPY.

Archibald E. Garrod, in Allbutt's System, in speaking of the treatment of rheumatism, says: "Great benefit is frequently derived from mineral water treatment, and brine baths, such as may be taken at Proitwich, Nantwich, and a few other places in this country, and at various places on the continent, are especially serviceable." Mentioned first of the Muriated-Saline Waters of North America by Herman Weber, in Vol. I., Allbutt's System, is the St. Catharines Wells, page 322, 1898.

Sodium Chloride plays an important part in the animal economy, by furthering the processes of absorption and excretion. Externally chlorinated waters in baths increase the excretion of urea, there is an increased consumption of oxygen, and there is increased excretion of carbonic acid. The functions of the skin are stimulated in consequence of the action of sodium chloride on the peripheral nerves. When the waters are administered internally their action in those cases with gastric and hepatic torpidity is most efficacious. All cases of the so-called uric acid diathesis are benefited by the use of these waters, the water and its salts furthering the oxidation of uric acid and having a certain solvent influence on formations of this substance.

At the Welland, in St. Catharines, we have a convenient and suitable place for the administration of the waters of this famous well, together with careful diet and the use of massage and electricity in suitable cases.

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF
MEDICINE AND SURGERY

VOL. XII. TORONTO, DECEMBER, 1902.

NO. 6.

Original Contributions.

VALUE OF THE ROENTGEN RAYS IN CANCER.*

BY A. R. ROBINSON, M.B., L.R.C.P. & S., EDIN.,

Professor of Dermatology in New York Polyclinic; formerly Professor of Histology and Pathological Anatomy in the Woman's Medical College of the New York Infirmary; Member of the New York Dermatological Society, of the American Dermatological Association; Foreign Corresponding Member of the Société Française de Dermatologie et de Syphiligraphie, etc.

IF one's knowledge of the treatment of cancer were derived solely from newspaper articles giving the opinions and proclaiming the skill of some modern "leading cancer specialist," or from the editorial columns of many of the current medical journals, he might be led to believe that a new era had dawned in the therapeutics of cancer; that at last there had been discovered an agent other than the knife that could cure one or all cases of the disease.

Fortunately much excellent work on the value of the X-rays in cancer has been done during the last two years both in Europe and America by skilled observers who, in the cause of science and humanity were seeking after the truth, and the result of their labors has been quietly published in medical journals. As some of these writers have done more in this direction than I have, it will be my pleasure and duty to utilize their published results in forming the arguments of my paper.†

The excuse I offer for addressing you on this occasion is the importance of the subject, and the fact that whilst my experience with the rays has not been quite as extensive as that of some others who have written upon the matter, I have devoted so much time to

*Paper written for the Meeting of the Canadian Medical Association at Montreal in September, 1902.

†I might state that the views I shall advance in this paper are similar to the general opinion of the experts who discussed the subject at the recent meeting of the British Medical Association. My argument, however, was prepared before the proceedings of the meeting reached me.

other methods of treatment also, that I feel justified in asking your attention whilst I consider, briefly, the value of the X-rays as compared with that of other methods of treatment, and particularly with that by caustics.

Two years ago I addressed this Association on the use of caustics in cutaneous cancers, and I then maintained that *the greater majority of all cases* of cutaneous cancer could be removed with very slight, if any, apparent deformity, if seen early, diagnosed correctly and treated with the proper caustic on definite lines such as were laid down by me at that time; and that, furthermore, with some exceptions, this surgical method of treatment is superior to an operation with the knife.

A plea most strongly urged in favor of the X-rays is that it does away with the necessity of using the knife in the majority of cases, and that the deformity following the treatment is so slight comparatively with that after excision.

These same arguments were employed by me in advising the use of caustics instead of the knife in suitable cases (and these were the majority of all cases), and that advice was based on the careful observation of nearly twenty years on the results of the two methods of treatment.

It will be my task at this time to describe what, with our present knowledge of the subject, can be accomplished with the Roentgen rays in cases of cancer, and, by comparing the results obtained with those gained by other methods of treatment, give it the proper place, and it has an important place, in our *armamentarium* against the disease.

We will first consider the action of the rays on *external* cancers, and afterward on the *internal* ones.

For the intelligent treatment of any given case of cutaneous epithelioma by either knife, caustic, or X-rays, it is absolutely necessary to recognize not only the form of cancer present, and its tendencies as regards rapidity of growth and the direction of extension, but also the probable extent of the cancerous infiltration into the neighboring tissues.

It is also necessary to know not only what I have just stated as regards the kind of cancer present, but also the proper technique as regards the use of the X-ray apparatus employed, *and very especially also to be able to judge what changes in the tissue, both normal and pathological, are being produced by the rays*, in order to give the proper treatment as far as the character of the exposures and the proper interval of time between the exposures is concerned. The treatment of cases, therefore, cannot be entrusted to one who is purely an electrician, it makes no difference how much he may know about an X-ray machine.

Clinical experience, microscopical studies, and our knowledge of X-rays as regards amount of rays produced and penetration

qualities, teach that for the superficial forms of cancer a low vacuum tube giving much Roentgen light and slight penetration should be employed, while for the deeper seated forms of the disease there is wanted a medium or high vacuum tube giving less light but more penetration; the use of the one or of the other depending upon the depth of the cancerous infiltration and form of cancer.

I do not intend to describe the technique of the treatment by X-rays, but simply to consider what can be accomplished by them in any given case of the disease when used in the proper manner, according to our present limited knowledge as to the kind of tube to be employed, the duration of application at the different times of treatment, and the distance from the target, etc., etc., and thus endeavor to estimate correctly the absolute and comparative value of the rays in the disease.

Let us suppose the mode of treatment in all cases is correct according to our present ideas, what results then can be obtained by the Roentgen rays? It is probable that the majority, perhaps a large majority, of the cases of superficial epithelioma of the skin can be removed by X-ray treatment when seen early and before they have invaded the deeper tissue. In eighty cases of rodent ulcer treated by Dr. Sequira, of London, thirty-four were cured. The majority of the remaining ones were still under treatment at the time of the report, and probably a considerable number of those were also cured in due time.

The most superficial form of epithelioma, sometimes, although incorrectly, called the eezematous form, as it commences objectively as a superficial dermatitis condition, and later shows epithelial proliferation, a form that is so often multiple and frequently occupying areas of considerable extent, has, in cases which I have treated, yielded very satisfactorily to the ray treatment.

If the disease is not multiple and the lesion a small one, not larger than a twenty-five cent piece, other agents, such as pyrogallie acid, and acid nitrate of mercury, or arsenious acid, are, I believe, preferable, as the removal by those agents is positive, quickly performed, and leaves a very satisfactory scar. The saving in time and expense is an item of much importance to many patients, and should be duly considered in every case. Some patients from the country, and city also, cannot afford the expense incidental to the long treatment usually required when X-rays are employed.

If the lesions are multiple, showing a predisposition on the part of the tissues to the disease, the X-rays should be used, not merely for the purpose of removing the existing lesions, as that can be done by other means, but with the object of influencing the nutrition of the skin in such a manner as to prevent a recurrence of the disease.

A combination of treatment by caustics, X-rays and internal medication gives the best result in these cases. The internal treat-

ment consists in securing the proper degree of alkalinity of the system, the avoidance of a meat diet, and the administration of either arsenic or thyroid extract, or of both.

When the disease is present in the form of a papule or tubercle, with an unbroken surface, the lesion can be destroyed by the rays alone. The treatment, however, would require several weeks, perhaps more than two months' time, with exposures two or three times weekly. With exceptions to be noted directly, I believe that in these cases a caustic is much to be preferred, as the destruction can be completed in a few minutes if caustic potash or the Paquelin cautery be used, and in a few hours, by the use of an arsenious acid paste. Failures to cure are rare, and the resulting scar deformity very slight, or perhaps not recognizable except upon close inspection. Freezing the part with ethyl chloride, and removal of the lesion by excision, is also preferable to the rays in these cases. Cocaine injection can be used instead of freezing the part.

If the lesion is on the eyelids, and the invasion into the sub-epithelial tissues is considerable, the rays should be used, as with them the disease can be removed with less destruction of normal tissue than by any other method. I have not seen any ill results to the eyeball from the rays, although I would advise that it be protected from penetration by them.

When the papule or tubercle is on that part of the nose near the inner canthus, and covered with apparently normal epidermis, the use of caustic potash or acid nitrate of mercury is the better treatment, as it is effective, the deformity resulting is too slight to be considered, and the lesion is quickly removed. The rays do not act so favorably or so promptly when the lesion is covered with normal epidermis as it does when an erosive or ulcerative condition is present. In the former case, if the operator desires to rely principally upon the X-rays, it is advisable to first remove the healthy epidermis by curettage, or by a caustic, before employing the rays. As the majority of these cases are of the rodent ulcer type, this injuring action on the epidermis is not followed by secondary lymph gland infection; but in the other forms of epithelioma such partial removal and mutilation might have serious consequences.

In some cases a combination of treatments is advisable in these cases of rodent ulcer; first a caustic to remove the macroscopical part, and afterwards the rays for the microscopical portion, to prevent if possible a reappearance of the disease. I have, however, treated so many cases of epithelioma of this form in this location so successfully, both as regards removal of the lesion and scar formation, that in my opinion the cases are rare in which the operator should subject the patient to a method that requires so much time, and if he be an out-of-town patient, to so much expense also.

When the lesions are upon other portions of the nose, and especially upon the alæ, situations where, as in the case of the eyelids, it is necessary to save as much normal tissue as possible, the X-rays give the best results as regards subsequent scar tissue formation, especially if the lesion is not a very superficial one. All these lesions, however, are curable by caustics, and the scar following the use of the proper caustic will differ but little from that following the use of the rays, except in advanced lesions situated on the alæ.

If the nodule, say, of the size of a pea or bean, exists in connection with an area of a warty or eczematous form of the disease, the nodule should be destroyed by a caustic, and the rays used upon the remainder of the lesion. Such lesions are not infrequent upon the nose, and especially in persons with a seborrheic condition of the skin.

If the disease has invaded the bony structures, the rays may give better results than any other method; at least the results in cases I have seen treated by knife or caustic have been very unfavorable. According to Startin, the outlook for X-ray treatment in these cases is not flattering, but some other writers report favorable results.

The comparative value of the rays, the knife, and caustics, in cases of epithelioma of the penis, must be decided by future observation on a sufficient number of cases for forming a judgment.

When the disease has existed some time, and, remaining superficial, has covered an area of some extent, say, from half an inch to two or more inches in diameter, with a raw surface over the greater part, the rays are a valuable agent, and probably effective in the greater majority of cases. The most favorable cases, the ones most quickly curable, are the very superficial ones having an erosive or ulcerative surface and only a narrow hard rolled-up edge. I treated one situated in the temporal region, a lesion circular in shape and one and a half inches in diameter with a very slight elevated margin, that appeared to be removed after seven exposures in a period within three weeks. Such cases, however, can be as satisfactorily cured by an arsenious acid paste, the actual treatment, the application of the paste requiring from six to eight or ten hours. Therefore, in all cases of lesions not larger than from one to one and a half inches in diameter, when situated on parts of the body favorable for treatment by caustics, if time is an important item, the rays are of less value than a suitable caustic.

If the lesion be upon the scrotum, the knife is the quickest and probably the best form of treatment, as few scrota are not improved by excision of a part; at least excision is not usually a cause of deformity.

If these superficial lesions—I am still confining my remarks to the superficial serpiginous form of epithelioma—occupy the eyelids or external or inner canthus and neighboring integument,

the X-ray treatment gives a very gratifying result; in these cases it is decidedly the best method of treatment to be employed, and here I should say the X-ray is a great and valuable addition to our armamentarium. I have seen lesions of considerable extent in these regions removed without any noticeable injury to the tissues of the eyelids.

The X-rays can be considered superior to caustics or the knife in all cases of superficial epithelioma covering a large area of two or more inches in diameter, with the exception of lesions on the scrotum. In the case of smaller lesions the location should determine the method of treatment. (I am supposing, of course, that the patient has the time and money for any method of treatment considered the best for him as regards removal of the disease.) If the lesion is around the eye, occupying a part of the lid, the rays give the best result, but on all other parts of the body a proper caustic gives results in a few minutes or hours equally as good as those obtained by the rays, and in some cases excision is a very satisfactory method of removal.

In each individual case, the decision as to the form of treatment to be adopted should be made from the standpoint of the patient, and not of the operator.

There are many cases of epithelioma of the superficial form in which there is a great tendency to reappearance or recurrence after apparent cure. The normal relationship between the epithelium and the connective tissue is changed, or there is a rebellious nature in the epithelial cells, or there may be other underlying causes of epithelioma, at any rate new lesions continue to appear. Such cases should be treated with the rays, with or without other local agents, and with such drugs internally as thyroid extract, and possibly also arsenic, with the object of changing the nutritive condition of the part. In this case treatment by the rays gives better results than by caustics or excision.

I have had under my care for one year a case of that rare disease, xeroderma pigmentosum. There were about fifteen carcinomatous growths varying in size from that of a large filbert to that of a pea, situated upon different parts of the face, one occupying the greater part of the left upper eyelid. All the lesions except two large ones disappeared after a few months' treatment by thyroid extract; at the same time there was very marked diminution in the pigmentation and angiomatous condition on the face, neck, forearms and hands. To remove the two remaining lesions that by the thyroid extract had been reduced to about half the size they were when first observed, I have used the X-rays, but the result has not been satisfactory. Five minutes' treatment with a low tube ten inches from the target would be followed by considerable erythema and tenderness. A more resistant tube would also produce unpleasant conditions in nearly the same length of time.

After two months' experiment improvement has not been satisfactory, and I have again prescribed thyroid extract. Probably these cases differ in the character of the factors causing epithelioma as compared with those concerned in ordinary cases of cancer.

When cases of epithelioma are neglected, a something that is the rule and not the exception, and the process has extended deep into the corium or subcutaneous tissue, as well as along the general surface, and especially if the infiltration has reached the neighborhood of large blood vessels, in particular those of the face or neck, the rays may often be regarded as the only agent which gives hope for successful treatment, and, as shown by the reports of careful observers, curative results by their assistance have been obtained in some of these inoperable cases.

These results are an additional proof that the rays are a very valuable addition to our armamentarium against cancer.

When the epithelioma is situated upon an extremity and about large blood vessels it still remains to be shown whether it were better to use the rays or whether it would be advisable to amputate the limb at the proper place. If there is any invasion of the glands no reliance should be, in my opinion, placed on the rays. At the present time I have in an old lady a case of papillomatous epithelioma occupying the entire back of the hand from wrist to fingers; a case that is slowly but surely improving under treatment by the rays. The slow improvement is probably partly to be attributed to her very irregular attendance for treatment. Amputation in such a case would not be justifiable before treatment by the rays were tried.

When, as in some cases of the pearly form of epithelioma, there is a formation of new lesions in the scar area, curettage and subsequent treatment by pyrogallie acid or arsenious acid or acid nitrate of mercury is much to be preferred to treatment by X-rays, as from the latter the exposures necessary to destroy the lesions are very liable to produce a serious burn on account of the greater vulnerability of the scar tissue in these cases, at least that is my experience.

An important point to be considered in choosing between the X-rays and other methods of treatment in all cases of epithelioma is the danger of producing by the rays either a serious burn or a permanent alopecia. It is admitted that an epithelioma always occupies a much larger area than appears to be the case to the naked eye, and in using the rays this area must be exposed to their influence, and on account of the repeated exposures necessary for removal of the disease, if seated on a hairy part of the body, an alopecia is, in my experience, the invariable result, whereas after the use of selective caustics the greater part of this cancerous area is not denuded of hair. Whether also the long treatment required by the rays has or has not an injuring action on internal

viscera is a subject for careful investigation. I have had several patients complain of unpleasant sensations in the hand after a few exposures, and it is quite conceivable that serious nutritive changes within the cranium or abdominal cavity may in some cases result. I raise the question as one worthy of future observation.

The cases of deep nodular and infiltrating epithelioma reported as treated by the rays are too few in number to enable one to form an opinion as to the comparative value of the agent in such a form of the disease. To rely upon the rays alone would seem to me to be not justifiable if the lesions are still recent and covered with apparently normal epithelium. Such cases should be treated in the manner already advised in similar cases of superficial epithelioma. I doubt, however, if anything can stop the course of some of the severe cases of rapidly infiltrating epithelioma—*épithéliome térébrant, épithéliome foudroyant*—unless situated upon a part of the body where an incision wide of the apparent limit of the disease can be made. It is true, as stated by Williams, that the rays act best as a rule when the disease is rather active, but that, I believe, refers only to the ordinary superficial forms of the disease. I have not had an opportunity to treat a case of the rapidly infiltrating form, nor has any treatment of such a case been reported.

In that form of epithelioma called rodent ulcer, in which the disease extends downward into the deeper tissues even more than along the general surface, destroying all the tissues of the part as it extends, producing in time a deep ulcer with, as a rule, only comparatively slightly infiltrated walls; if the disease has reached this advanced stage when treatment is requested by patients, and especially if the lesion is situated near the eye, as is usually the case, the rays offer about our only hope. Removal by incision or by caustic is, in such advanced cases, very rarely indeed successful, and should not be attempted if treatment by the rays can be had.

It is possibly too soon to form a definite opinion as to the curative power of the X-rays in the advanced cases of the deeply destroying rodent ulcers, but from my own experience and that of others it appears that a certain percentage of these hitherto hopeless cases can be cured. The X-rays therefore are an absolutely necessary agent to an operator who treats all cases of cutaneous cancer.

I beg, however, to remind the medical profession that all these cases commence as a lesion that, in the great majority of instances, if not in all, can be easily and quickly cured by the previous methods in use, if early diagnosed and properly treated. Sometimes it is the fault of the patient, but it is also often the fault of the physician that these cases are allowed to proceed in their destructive courses until the almost, if not quite, hopeless condi-

tion is reached. I have seen many such cases, and it is "up" to the profession to recognize their moral responsibility towards these patients. An X-ray apparatus is not at all necessary for these cases when seen early; a proper caustic, or excision will be effective if properly used.

In cancer of the breast only a few cases, as yet, have been reported as probably cured, and those reported have been reappearances after amputation. It is impossible at the present time to account for the great differences in the results of treatment as reported by different writers. It is to be feared that the brilliant results announced by some operators will be things hoped for but not always realized. In seven inoperable cases following operation, reported by Johnson and Merrill, no improvement was produced by the rays. Williams thinks the rays would probably be of benefit in some cases. He also finds that the more slowly growing tumors, the so-called schirrhous, offers greater resistance to the action of the rays than do the more rapidly growing cancers. Some writers report almost all their cases as improved or apparently cured by the rays. As stated above, the number so far reported is too limited to permit the forming of an absolute conclusion as to what can be accomplished in any given case by the rays in mammary cancer when used alone, or for reappearances after operation. For post-operative cases, it is evidently better than the knife or other agent, but that is not saying much. It does, however, seem that some of these cases can be cured, and that is an advance over past methods.

I have at present four cases under treatment. In one of these we will call the diagnosis doubtful, although the case was sent to me by a gynaecologist of experience as a case of mammary cancer, and a similar diagnosis was made by another physician before I saw the patient. The woman is forty-six years of age, married, but had no children. The symptoms were those of the early stage of carcinoma,—a hard, irregular mass connected with the gland and involving the connective tissue sufficiently to interfere with elevation of the skin by the fingers and cause some retraction of the nipple. After six weeks' treatment the improvement is so marked that no one would now make a diagnosis of cancer. It is too soon, however, to give a positive prognosis as to the final result.

The second case was one of well marked carcinoma the size of a hen egg, with an ulcerated fungating surface. After four months' treatment the ulcerated surface is replaced by a smooth scar surface and the disease is apparently removed.

The third case is one of advanced schirrhous cancer in a woman of sixty-seven years of age. The entire mammary gland of the right side, including the nipple, was destroyed: there was an ulcerating surface about three inches in length and half an inch in diameter, situated near the ribs as the patient was thin of person,

and there was some infiltration of the tissues between the ribs. Such a case could, and should, be regarded as inoperable either by caustics or knife. After three months' treatment scar tissue occupied the part where the ulcerating area was, and no evidence of the existence of a cancerous affection could be detected. I have since that time given three months more of treatment at intervals of two weeks, as a precautionary measure, although no signs of the disease existed. Such a result is very encouraging for future treatment of the hitherto hopeless cases. I might state also that seven years ago I successfully amputated the breast for carcinoma in a niece of this patient; I say successfully, as there has been no reappearance of the disease. Microscopical examination verified the diagnosis.

A fourth case showed a pea-sized nodule in the skin at the scar line three weeks after amputation of the breast. This disappeared under treatment. I have continued exposing the whole of the anterior surface of the chest area of the affected side for six weeks and no new nodules have made their appearance as far as my observation can judge.

From the foregoing results in conjunction with the result in cases reported by others, I believe with those who maintain that every person who has been operated upon by the knife for mammary cancer should be treated by the X-rays for a few months after the operation; such treatment commencing two or three weeks after the operation, with the object of destroying any pathological epithelia that may have been left in the tissue. Also, if the cases are inoperable when first seen, the patient should be given the benefit of the possibility that the rays may effect a cure. Considering the very unfavorable result, the few cases permanently cured by excision, I believe with Morton that every case of mammary cancer except those seen in a very early stage should be first treated by the rays, and their action on the disease studied before resorting to amputation. The cases published justify the above opinion.

In cancer of the lip, according to Williams, all cases when seen early do well, but I prefer other methods to precede the use of the rays, at least until more cases with favorable results have been noted. The superficial forms are too easily cured by caustic potash, and for the deeper lesions the Paquelin cautery or the knife may be used, but unfortunately reappearances are very frequent. These cases of pure epithelioma with prickle cell structure and tendency to lymphatic gland infection seem not to be influenced by the rays like the rodent ulcer forms of cancer or gland carcinomata. I saw a case of epithelioma of the upper lip that had been treated several times a week, for two months, by a physician accustomed to using the X-rays without any improvement

whatever, although the disease was superficial and could have been and was successfully and quickly removed by caustic.

In reappearances in these cases after operation, or when there is already invasion of the lymph glands, the curative value of the rays has not been demonstrated. It is still to be shown that deep-seated epitheliomatous growths of the skin or mucous membrane, not rodent ulcer in character, can be cured by the rays. Personally, I believe that whilst the progress of the disease may always be checked, a cure is not probable.

I am not aware of the successful treatment of any case of cancer of the jaw by the rays, although usually the disease can be checked and the growth reduced in size.

I have failed to obtain any benefit from the rays in a case of epithelioma of the inner surface of the cheek, although the rays were applied both through the mouth and externally, in the latter region even to the production of a burn by a hard tube after two months' unsuccessful treatment according to rule. According to Scholtz there should have been an absorption of rays on the mucous surface from the use of a hard or medium tube on the cutaneous surface, but I have not noticed such action in this or other cases. The Paquelin's cautery is preferable to the rays or other methods in such cases as the above, although the prognosis is always grave.

Startin has reported a favorable result in a case of epithelioma of the tongue. I am afraid his success will not be duplicated by others. I have at present a case of cancer of the whole end of the tongue, and also of the arch of the fauces, that has been under treatment six months by the X-rays. At the commencement of the treatment there was already secondary infection of a lymph gland of the neck; the enlargement seemed to be about half the size of a hen egg. At present only a small nodule is to be found; the disease in the fauces has been checked and the end of the tongue is not worse than it was six months ago. Although I do not expect to cure this case, yet it shows how the disease can be influenced by the rays and that life can be prolonged, if that is any favor to a person with such a misery-producing disease.

What has been said about cancer of the throat is also true of cancer of the larynx. I am not aware that there is a report of a case completely cured by the rays, although the morbid process can be favorably influenced and retarded. I have at present a case of branchiogenic carcinoma with secondary growth following operation for removal, and after three months' X-ray treatment no improvement is observed. The case will evidently terminate fatally. Here the rays have the same value for such cases as the former methods of treatment: they are of more value to the operator than to the patient.

Perhaps in the future some case of cancer of the stomach may be cured by the rays, but if the observation of Scholtz be correct

that the rays pass through and do not injure the visceral organs, as the stomach, liver, intestines, brain, etc., I fail to see grounds for hope in these cases. I think, however, that these observations may possibly be considered as not to be depended upon, otherwise how can we explain the disappearance of secondary growths in mammary cancer, or of growths in lymphatic glands such as I have reported above and as have been reported by all writers on the subject? Personally, I will continue to experiment on other lines for the treatment of these cases of internal cancer with the hope of finding something more valuable.

What is true of cancer of the stomach is also true of cancer of the uterus, and so need not be further discussed at present. If a cancer of the mouth cannot be cured, what hope can there be for one of the uterus?

What I have said of cancer of the stomach and of the uterus holds good as regards any internal cancer. The disease may be retarded and the pain lessened, but that is the limit of usefulness obtained up to the present time.

I have not taken up your time with the relation of a list of personal cases of cutaneous cancer, as my experience coincides with that of such excellent and reliable observers as Sequira, of London; Williams, of Boston, and others who have published upon the subject, and I have taken it for granted that you are familiar with their writings and that you rely upon them and not upon the "articles" and interviews in "yellow journals."

CONCLUSIONS.

1. The Roentgen ray is a very valuable addition to our armamentarium for the treatment of cancer.

2. Some cases of advanced epithelioma are incurable except by the rays.

3. Many of the cases cured and regarded as inoperable by other means could have been quickly cured in an early stage of the disease, hence physicians should devote proper attention to this serious disease, much more attention than they have as yet given it.

4. The majority of the cases so far reported as cured, have been cases that could have been cured much more quickly by the knife or caustics, especially by the latter.

5. In cutaneous cancer the scar is sometimes better after the ray treatment than after the use of caustics, but for the majority of cases caustics are preferable, as their action is definite and there is a great saving of time to the patient.

6. In many cases of cutaneous cancer the ray is a valuable agent in combination with other methods, and when the disease is situated around the important blood vessels it is the only proper

agent to employ, except in some cases on the extremities, where amputation would be advisable.

7. All cases of carcinoma of the breast, except those seen in a very early stage, should be treated by the rays before resorting to the knife. The rays should also be used in all inoperable cases and in all cases after amputation has taken place.

8. According to our present knowledge, the X-ray treatment is not curative in internal cancer of any part of the body—mouth, larynx, stomach, uterus, etc.

9. To obtain the best results there must be no fault in the technique of the operation, in order to avoid a serious burn and to get the desired action on the cancer tissue.

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NEUROSES AS SEEN IN ORTHOPEDIC PRACTICE.*

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THE term neuroses here employed is intended to have a generic significance. It includes the more specific expressions, which, with more or less definiteness, have been employed; for example, hysteria, neurasthenia, nervous prostration, etc. There are a number of such ill-defined affections having symptoms referable chiefly to the nervous system, which may be conveniently grouped together as neuroses. They manifest a disturbance of functional control, but are not marked by recognizable changes in the central or peripheral nerve tissues.

Because of the disability so constantly accompanying neurotic states, the orthopedic surgeon is frequently consulted, and the duty of deciding whether or not any organic disease be present, and if so, what it is, or whether the case is simply a psychosis, is one which implies a serious responsibility.

In the fact that it is the orthopedic surgeon who is consulted, and not the neurologist, is found some indication of the general characteristics of the particular patients whom he is called to see. Frequently it is a patient who is suffering from traumatism—more frequently slight than severe—and the doubt existing regarding recovery has given rise to nervous symptoms. Sometimes it is found that disease has been present in some bone or joint, and a feeling of disability remaining after recovery gives rise to a condition of chronic invalidism. Most frequently there is found some form of so-called “spinal disease” marked by much suffering or disability, or both.

The so-called “spinal irritation” is often spoken of and treated as if it were a lesion of the spinal cord or its meninges, and it was so classified by Rosenthal and others. That such a classification is erroneous has been ably contended, and cases here reported will serve to uphold this contention. Instead of the irritation being due to changes in the cord, its membranes or other parts of the spine, it is due to unhealthy and abnormal functioning of the higher centres.

It will appear from reports of cases following, that patients who had at one time been affected by some well-recognized disease, but had really recovered, were allowed to continue in the belief that recovery from the disease or from the injury had not taken place.

* Read at the annual meeting of the American Orthopedic Association, Philadelphia, June, 1902.

Of the various causes operating to produce this state of continued invalidism, suggestion, arising from many different sources, is the chief. Suggestion is a potent influence in the life of all persons, but especially so during the formative period. In childhood and youth the faculties of memory and imitation are at the time of their greatest activity, and in later years the individual, as we find him, is the ego made up of the original self as pre-determined by heredity and modified by education.

Every physician must be able to recall many occasions when the difficulties attending his relationship to his patient have resulted not from real ills, but from hurtful impressions arising from unwise suggestions having their origin in ill-timed and meddlesome inquiries made by professed well-wishers.

From the time that a child cries for food and gets it, up to the time when the same child, grown larger, complains of pain or sickness to elicit sympathy, or craves for notice or notoriety and gets it, the influence of suggestion is ever operative for good or ill. "Whipping a child for a confessed fault imparts a strong suggestion that falsehood is better than truth, with the result, that the next transgression is denied and punishment is escaped, and the child soon learns that lying is better than the truth." On the other hand, the suggestion to a child that it is manly and heroic to endure pain without complaining begets a spirit of endurance and self-control. "As the twig is bent the tree's inclined," and in early life much of the seed-sowing is done which brings forth the harvest of neurotics who are but too well known in their protean aspects to every medical practitioner.

All-powerful as suggestion is as an active agent in education and in the production of disease, it may be employed also for beneficent ends in the treatment of many of the nervous diseases, and of the psychic phases which manifest themselves in the course of ordinary diseases.

Heredity is an important element which should receive careful consideration. Some of the cases to be reported, which have been most obstinate, show marked neurotic tendencies in both the father and the mother.

In the case of those whose personality is warped by heredity, and trammelled by a training which trusts to feelings and whims rather than to reason and reality, mere suggestion that there is some ground for supposing organic disease to be present, is often quite enough to nullify feeble attempts at self-government.

Probably the most baleful influence in the production of the neurotic state is found in the home, whether it be in the house of the poor or of the wealthy. Friends and members of the family magnify each complaint of pain and attach to it an undue importance, not knowing that while, on the one hand, pain rightly interpreted is a valuable guide to lead to the discovery and loca-

tion of organic disease, yet, on the other, when not carefully questioned and scrutinized, it may run riot with the patient and become a veritable will-o'-the-wisp, leading astray the unwary and uncritical physician.

Sometimes there is a failure on the part of the medical attendant to analyze his case, to apprehend clearly its various elements and to assign to each phase of the departure from normal health its proper value and true significance.

It is by no means uncommon that organic disease is present, but that the psychic aspect of the case assumes an undue prominence. Under such circumstances it may be peculiarly difficult to distinguish between the true and the false, and even if the distinction be clear in the mind of the medical attendant it may be impossible to imbue others with confidence in his opinions and judgment. Vacillation at this time is ruinous. Error in arriving at his conclusions may be harmful, but not more disastrous in its effects upon the patient than to waver and show an unsteady hand after he has assumed control. Certainty and exactness of diagnosis are important, but an unflinching course of procedure afterward is not less essential to success. Vacillation but adds to influences already at work, dragging the storm-tossed neurotic from the paths of self-government and sanity.

Under these conditions and in a multitude of others arising from an unfavorable environment, harmful suggestions arise which keep the patient from regaining the confidence so essential to a satisfactory recovery, and thus a state of chronic invalidism may be continued for many years, all virility being sapped from men and all feminine qualities which characterize true womanhood being blotted out or cast into the mists and shadows.

Though these patients are likely to become self-centred, and selfishly, though unconsciously, to magnify their ills because so doing makes them the object of sympathetic attention; yet parents and friends are likely to welcome the coming of a deliverer.

Neither these unfortunate patients nor the friends are really fond of their bondage, and though sometimes they may seem to hug their chains, yet it is because the prospect of deliverance is not made clear to them. At first it may not be wise to explain fully one's opinion. This is not equivalent to deception; to practise deceit is the surest road to failure. It is most essential that the one upon whom falls the responsibility of making a diagnosis and upon whom falls the duty of treatment shall reach a very absolute and positive conclusion, that he shall fortify himself for speaking to the patient and the friends in terms of encouragement and confidence. It is often found that these patients have been wandering long in the mazes of uncertainty; and when they have become fully convinced that some one understands them and appreciates their afflictions, they often give a most loyal co-

operation, and the time soon comes when the attendant can take them fully into his confidence.

Perplexed by the often seemingly anomalous train of symptoms manifested by the patient, hampered by the great solicitude and the unwisely exhibited sympathy of the friends, and harassed with doubt as to the extent to which organic disease or pathological conditions resulting from traumatism may account for the illness, the medical man's pathway is often strewn with thorns and his steps endangered by pit-falls. Both for his own peace of mind and for the liberation of his patient clearness of mental vision is now essential.

CASE 1.—G. H. P., aged 27, at one time a school-teacher, had studied dentistry for two years prior to the commencement of his present illness. In March, 1896, he walked about fifteen miles and was somewhat exposed in the snow, and his feet and legs became wet. This was an amount of exertion and exposure unusual to him. The next day there was numbness in the feet when the head was lowered, disappearing when the head was raised. On the second day the numbness was permanent. This disturbance of sensation continued to ascend until it reached a line about two inches below the nipples, and increased in amount until all sensation was lost. Accompanying the numbness there was a loss of muscular power, manifested at first by clumsiness; the paralysis of the lower extremities in a short time became complete. Power over the sphincters of the bladder and rectum was lost. This condition remained constant for about a week, after which sensation improved, first in the vicinity of the right hip, until at the end of six weeks sensation was normal. About a fortnight after sensation began to improve, power began to return. Control of the sphincters was largely but not entirely regained. Improvement continued until the end of June. At one time during this primary illness the temperature was elevated for two or three weeks, but never rose above 102 degs. F., and was first noticed about two weeks after the commencement of his illness. At about the end of June a stranger was helping him in some way in bed and hurt his back. This caused a return of the numbness and of the other symptoms, though they were less marked than before, and were accompanied by no elevation of temperature. At the end of another month there was considerable improvement, which continued until the spring of 1897. In the meantime he suffered from a severe attack of la grippe with elevated temperature. During the summer of 1897 he frequently sat up in bed, but had another set-back attributed to not being sufficiently careful while moving in bed. In the spring of 1898 electricity was employed, but he claims that the current was too strong and again he had a relapse. In the fall of '99 he had some apparatus to assist him in sitting up and to bring him to

the sitting posture very gradually. At one time he succeeded in getting out upon the floor, and could stand by a table placed beside the bed, and even move about with crutches, but again had a relapse caused by over-exertion. This record of "ups and downs" has continued until recently. During these years he has been in various hospitals and sanatoria under treatment. He was twelve months in the Toronto General Hospital, for a considerable length of time in the General Hospital at London, in a sanitarium at Battle Creek, Michigan, and finally in the Home for Incurables, London.

This patient came to Toronto Orthopedic Hospital, October 31st, 1901, and remained until May, 1902. He was unable to walk, and had not done more than walk about the ward with crutches for several years. He lay or sat up in bed nearly all the time, had no motion of the bowels without an injection, did not empty the bladder at any time but kept a urinal in bed constantly, allowing the urine to dribble away without making any effort at any time to complete the act of micturition.

When I directed him to dress and come with me to the gymnasium he asked to be allowed crutches, but having found by previous examination that there was fairly good power in all his muscles I positively refused to allow any aid except the guidance of my hand directing him as he came down the stairs and through two rooms to the gymnasium. He remarked that he had done nothing like it for five and a half years.

Seeing that he was unable to keep his balance when attempting to walk, a trolley was arranged with a car running on a track about six feet above his head, from which a rope extended downwards to straps under the chin and occiput such as are usually employed while applying a plaster-of-Paris jacket. This prevented him from falling while learning to walk. At first it was with considerable difficulty that he was able to use enough force to propel the little car. He made gradual but continued improvement, and within a few weeks could walk rapidly to and fro across the gymnasium floor. So soon as he was able to balance he was gradually inducted into the ordinary gymnasium work, until at present he is able to do a large part of the exercises which are usually done. (February, 1902.)

The nurse was instructed to allow him the urinal once in two hours, at which time he was to make a definite effort to empty the bladder. Each day a rectal injection was prepared for him, and he was allowed to go to the closet and use it himself. After a short time he was refused the use of the urinal entirely, and soon he showed his ability to go back and forth to the closet as circumstances required. For a long time he remained pale, walked with a stiff gait, and showed but little comparative interest in his own welfare and progress. His urine is alkaline, loaded

with pus, and he is now taking a mixture of benzoic acid and salol. As soon as the fine weather came he was urged to go out of doors and virtually compelled to adopt active habits, such as to practise running, etc. Early in May he went to the country to work upon a farm, and writes me that he is still improving. (June, 1902.)

I would not presume to have an opinion as to the amount of real disability present at the commencement of his illness, due possibly to congestion of the cord, but I think it is safe to say that the first link of his vicious chain was forged when, early signs of recovery having appeared, he was put back to bed again at the slightest professed indication of numbness, pain or disability.

Although this man is working up to a sense of his condition, and shows an increasing interest in, and appreciation of, his duties and relationships as a citizen and as a responsible member of society, yet there is no probability of his ever regaining his normal health and manhood. Irremediable injury has been done him, the best elements of character have been sapped, and he will bear with him through life burdens which have accrued during years of needless invalidism.

CASE 2.—E. D., aged 27. In June, 1901, this young woman sprained her knee slightly stepping off a street car, and the next day felt a pain in the same knee. Still finding discomfort in the knee at the end of two weeks, she consulted her medical adviser. For several months afterward the knee was treated by rest in bed for a number of weeks, by having a plaster-of-Paris protecting splint, by counter-irritation, etc. Some time during the winter the conclusion was reached that the knee was tubercular.

Being consulted in February, I found the knee slightly smaller than its fellow; no local elevation of temperature; a moderate degree of atrophy of calf and thigh; no elevation of body temperature. The knee had not been swollen at any time; motion was not limited. No infiltration or effusion in or about the joint was manifested to eye or fingers. A skiagram revealed nothing differing from the other knee. I could not learn that there had been any other signs or symptoms to arouse suspicion besides pain and a vague feeling of disability and discomfort. An older sister had fallen some years previously and suffered a fracture of the neck of the femur, and is lame. A great fear of permanent lameness possessed the minds of the family and the patient. I thought the conclusion justifiable that there was neither fracture, displacement nor disease of any of the structures entering into the formation of the knee-joint nor of the extremity. The patient came to Toronto and directly under my supervision. I advised gradually increasing use of the limb. Some difficulty was experienced in getting her entire confidence, as frequently

there was some complaint of pain. Daily massage and active systematic work for three months has almost completely overcome all doubt in the mind of the patient, and all feeling of disability and discomfort in the knee.

CASE 3.—W. D., aged 22. About two years ago her wrist was scratched with a pin, and after becoming septic it was found impossible to heal the wound. Gangrene occurred, and after amputation of the forearm gangrene appeared in the stump and a secondary amputation was necessary. The extremity of the stump is now found about the junction of the upper and middle thirds of the upper arm. Having complained much after this of pain is one side of the abdomen an intrapelvic operation was performed through the vaginal canal. Just what was done in this operation I do not know. This was performed in the spring of 1901. In July it was noticed that the left hip was very prominent, and she soon began to walk with a very marked limp. She consulted Dr. Galloway in January, 1902, because of the very marked lateral curvature which was present. Ascertaining that the curvature had come on very rapidly and finding that the shoulder was drawn down very close to the hip upon the same side that had been operated upon, it was thought possible that some morbid intrapelvic condition accounted for the deformity. Careful examination by Dr. S. M. Hay afforded no information, as the parts were declared to be normal. While under anesthesia it was found that the trunk was easily straightened. She seemed much pleased to report that she had undergone nine operations.

It was advised that she come into the Orthopedic Hospital and be constantly under supervision for some time. Her chapter of mishaps seemed to continue, and a very short time after admission she spilt very hot water upon her foot, causing a troublesome scald. She has been kept daily, except while laid up because of accident, at work in the gymnasium. Suspension of her weight through the spine has been made a prominent feature of her work, while heavy dumb-bells have been attached to the leg, shortened by tilting of the pelvis.

Early opportunity was taken to tell her candidly about her condition and the necessity of assuming self-control and ridding herself of various habits, which were standing in the way of her best welfare. She has proved a docile patient. Such training during five months has resulted in very marked improvement; the curvature of the spine having almost entirely disappeared leaving her with a scarcely noticeable limp, and greatly improved health and appearance. When she came to the hospital her appearance was that of debility; she had lost all self-confidence, and yielded herself a ready victim to her real or supposed misfortunes. Only two days ago she came to me and said that she was desirous of returning home, because that her mother and

sister were ill, and that she felt it her duty to return and take care of them and assume charge of the work needed by the family. She is self-confident and firmly believes that she will be able to bear well her part.

CASE 4.—L. P., aged 17. I saw her first in October, 1900. Her spine was very tender, especially in the lumbar and sacral regions; she could not lie down because of the pain experienced in so doing; walked with a peculiar limp, turning the right foot over upon its outer border at each step; complained of weak eyes, which condition was said to be due to "disease of the spine;" gave a rather vague history of having sprained both knee and ankle. Her mother was greatly surprised at being told that both joints were in a healthy condition.

Examination of the trunk showed perfect mobility of the spine, but great "spinal irritation." Examination of the right foot and leg showed that the peronei muscles were active and possessed a fair degree of strength, although she had been told that the turning of the foot was due to paralysis of these muscles.

This girl's mother had a worn and worried appearance and a very nervous manner. While in my office she talked incessantly of the girl's illness and great suffering and of her husband's "nervous prostration." He was then in a sanitarium under treatment, his nerves having given away under the pressure of business. Up to the present he continues to be an invalid. The mother arranged to bring the girl to me for treatment and then changed her plans, wrote me, inquiring about many points, came to consult me again, and again delayed. Finally she brought her daughter to the hospital to leave her with me in October last.

Notwithstanding that I had had plenty of opportunity to make observations, yet in a moment of weakness I consented to the mother remaining in the city for a week, and allowed her full liberty in calling upon her daughter and in taking her out to visit friends. Throughout the girl's stay with me, I realize now, a mistake was made in allowing too great laxity of discipline. She remained during six months; but owing to the interference of many incidental things, such as a long period of attendance by a dentist for the care of her teeth and visits to friends in the city, her progress has not been satisfactory. She has returned home very greatly improved, but in a condition which will permit, I fear, of speedy relapse because of her home environment.

CASE 5.—N. M., aged 19. Dr. Galloway was consulted by her in the summer of 1901. She was one of a number of girls in the family and was said to have been an invalid for a number of years, receiving constantly the sympathy and attention of her mother and sisters. On inquiry it was found that one of her most prominent characteristics was her being subject to a form of "spasm." Careful inquiry into this showed that they were not

epileptoid in character but cataleptic. For months previous to the time of consultation she had been confined to bed during a considerable portion of the time without being able to assign any definite cause for her condition, and the family seemed convinced that she was quite a confirmed invalid.

A request to treat this girl in her home was met by a prompt refusal. The family was informed that no responsibility would be assumed for her treatment, unless she came to the hospital; and that she must not receive visits from her family or friends, and would not be allowed to go out without special permission. She was assigned the regular work in the gymnasium as a means of engaging her attention and exercising discipline. A few days after her admission, and while engaged in the gymnasium, she became cataleptic; direction was given to carry her into the next room and to leave her there. Having assured ourselves that she was in no danger she was left unmolested for a couple of hours. At the usual time for the next meal she was roused up brusquely, and asked to go to the ward as it was time for supper. Only once afterwards did she allow herself to fall into a similar condition. She soon adapted herself to the regular hospital and gymnasium *regime*, increased in health, strength, color and vivacity, and at the end of three months she returned home convalescent.

CASE 6.—L. D., aged 22, a farmer's daughter, said that she had been unable to work for six years, that she suffered with pain in the back and head and inability to exert herself, that for three months previous to consulting me she had been unable to help herself, and that her mother had been an invalid for ten years and was said to be suffering from "spinal disease." This young woman was brought to my office in the ambulance, having been brought from her home to the railway station in the country on a stretcher. Upon my requesting her to disrobe that I might examine her spine, her aunt said that she was unable to stand or even to hold up her head. By insisting upon her doing as I requested, she did stand up for examination. I was unable to find any evidence of organic disease. She was of good color, though perhaps rather pale; muscles well developed; a fair amount of adipose tissue. She was symmetrically built and her heart and lungs were normal and acting slowly. I assured her father and aunt that she had no serious illness, but that I could not consent to take her under my care except on the condition that she be left in the hospital absolutely under my direction, and that I could not allow her to make or receive visits. These conditions were at once agreed to, and within an hour of the time when she came into my office she walked up two flights of stairs to a ward in the hospital. A few days afterward she was taken into the gymnasium an hour each day, and work at first light, but

increasingly difficult, was given until she was able, with other patients, to do all that was required of her. Treatment was continued for a period of six weeks, care being taken to increase constantly the amount and the difficulty of the work done. At the end of the time she was spoken to very plainly regarding her condition and tendencies. She returned home and has now for more than a year and a half continued well and is working hard.

CASE 7.—E. G., aged 18, rather anæmic and of nervous manner. At fourteen years of age she complained much of headache, backache, and general lassitude, so that she was kept from school most of the time. During the four years that have elapsed both she and her family have considered her unable to work; and during this time she has been examined by a gynecologist, who removed one ovary; an orthopedic surgeon, because she was lame and believed to present symptoms of hip disease, who assured the family that she had no joint affection; and a neurologist, who said he believed her condition was one of hysteria.

At the time of examination, in April, 1900, I found her very lame. Her limp, however, was very different from any that I had observed. Though she had walked with marked lameness for some years, yet there was no evidence of any inflammatory condition of any joint or of other lesion, and but very trifling atrophy. The only possible organic cause which could be found upon examination was a foot considerably pronated. Whenever any part of the leg or foot was touched, however lightly, the entire limb was thrown into violent and erratic convulsions (I do not know what better term to use, so irregular and so extreme were the excursions of the limb). She had a systolic murmur; otherwise there was no evidence of organic disease. I expressed the opinion that the case was one of hysteria and advised that she come to the Orthopedic Hospital in order that she might be completely under control. Very definite and precise instructions were given to the directress of the gymnasium to the effect that whatever work was assigned must be done with great care, beginning with the simplest forms and movements, calling gradually into exercise each individual extremity, and seeing that excuses were not accepted in place of work. This course was pursued during the month of June, frequent observations being made, but disclosing no real cause for her lameness except the undue pronation of the foot. This, I am disposed to think, was acquired, having arisen from her manner of walking for so long a time. She proved a very docile girl, but was ready on the slightest provocation to burst into hysterical weeping. At the end of the month her limp had almost disappeared, her health and color had greatly improved, and she had been taught to place the unduly pronated foot and walk with it in a correct position. As she was to return home to

her mother at this time, I entertained fears that she would relapse during the two months which must pass by before she could come back to her work in the gymnasium. Careful instructions were given to her mother and to her medical attendant, which were scrupulously carried out, in consequence of which she returned in September, showing that improvement had continued. The instructions were to the effect that the girl's attention must not be allowed to centre upon her own troubles, but that she must be assured that her complete and permanent recovery was in certain prospect and that she must learn to rely upon herself.

On her return to the hospital, in September, she was subjected to the same discipline as formerly for four months, at which time she had very greatly improved, and could receive ordinary massage without manifesting any reflex movement in the limb which formerly could not be touched even with a feather without manifesting the most exaggerated reflex movements. In her gymnasium work special care was taken to have her take exercises demanding the balancing upon each limb alternately, also the alighting upon the feet from a height, as in vaulting, and in suspension by the arms, etc. These she soon learned to do without experiencing any inconvenience and without the appearance of reflex movements in the affected limb. Considerable difficulty, however, was found in teaching her to run. She was taken out upon the lawn, and with her classmates was engaged in various games. Considerable ingenuity was required to get over the apparently insuperable obstacle presented by running. The quick movement from the sound limb to the affected one appeared to give her a sudden spasm and to block for the moment any further progression. Perseverance along this line and the full engagement of her attention and the arousing of interest in the games finally overcame even this difficulty. Her color and general health were much better, and since her return home she has assumed the duties and responsibilities of the household. Only a few days ago her medical attendant wrote me saying that her condition had continued to improve. It is now about six months since she left the hospital. Her lameness has almost entirely disappeared. There is simply a noticeable lack of symmetry in walking, so slight that an ordinary observer would scarcely perceive the defect.

CASE 8.—M. D., aged 29, who three years ago had a carbuncle situated near the coccyx. In giving her history she spoke of "abscess of the spine," and said that some bone came away after the incision. The patient is tall, has very slight muscles and a poorly developed chest, but is of good color and presents no evidence of tuberculous disease. The cicatrix shown upon the spine does not indicate that there was anything more than a small carbuncle. During three years, however, she has

worn jackets and braces, has been advised change of residence for her health, etc. She was referred to me in order to have a brace applied before leaving for travel abroad on account of her health. Her invalidism continued up to the time when I saw her, in May, 1900. She then complained greatly of pain in the spine and said that she was unable to work. She was immediately subjected to the usual discipline of the gymnasium, with results as gratifying as in the former cases.

CASE 9.—B. W., aged 18. Had typhoid fever in January and February of 1898. On her recovery from the fever it was found that she was unable to walk or even to stand; consequently she was taken about in a wheeled chair, from which she was carried again to her couch or bed. This condition continued until I saw her, in June, 1899. At that time she presented the following conditions: A rather tall and obtuse-looking girl; knees flexed and could not be extended to more than 120 degrees; feet in a condition of equinus, the plantar surface being at an angle of 120 degrees with the axis of the leg; muscles symmetrically atrophied; slight disturbance of sensation. The case was believed to be one of multiple neuritis following typhoid fever. The recovery from this condition is generally satisfactory; hence, a favorable prognosis was given. The deformities were easily corrected. During the subsequent months much difficulty was experienced in re-educating the patient to walk. She had already been informed by a number of physicians that she would be a cripple throughout life, and was so fully convinced of this that her lack of co-operation in the efforts made proved quite an obstacle in the way of progress. She was at first held up by the arms and her feet and limbs were moved for her. This exercise was frequently repeated until she began to put forth some voluntary effort. Subsequently she reached a point where she could walk by the aid of crutches. She was then subjected to regular class work in the gymnasium, being allowed to stand supporting herself against the wainscoting, which extended as high as the window-sill. Gradually she was led on from one point to another, it being necessary at every step to direct her will and to urge her forward to renewed effort. It was only after she had acquired the power of moving about independently with considerable security that she seemed to recover some brightness and to manifest willingness to co-operate in the efforts being made. When she had regained the power of moving about so as to take care of herself, she was not allowed to return to her father and mother, who were aged and unwisely sympathetic, but was sent to live with a brother, who was carefully instructed how to deal with her. He found her employment in a factory, in which she continued to work, making her own living and making constant improvement until her recovery has become complete.

CASE 10.—N. M., aged 21. For some years she has been a source of anxiety to her family because of ill-health, which, upon cross-questioning, seemed but indefinite in character. She had been subject to various spells and spasms. Upon physical examination, no organic disease was found. She was brought to the hospital with the understanding that she was not to be visited by her friends or allowed to return home. Subjected to the usual discipline, she became unconscious on one occasion in the gymnasium, but without using any efforts to restore her to consciousness she was ordered to be carried into the adjoining room, where she was left for about two hours without any attention being paid to her further than sufficient to satisfy ourselves that she was in no danger. At the end of that time she was spoken to sharply and told that, as it was tea-time, she must at once get up and have supper. She responded to this. Only once subsequently was there any manifestation of this kind. While under treatment she improved in general health, became very robust, athletic and cheerful, and returned home in good health and spirits and has so remained.

CASE 11.—F. S., aged 23. This girl presented a slight lateral curvature of the spine, also round shoulders, and complained of pain in the back and side. She had been unable to work for some years and had been the subject of considerable anxiety to her family. She, too, was subjected to the usual discipline in the hospital. On one occasion, while participating in the regular work, she was seized with a trembling fit, and word was sent to me that she was having spasms. Instead of going to her, I sent word that her work must be continued, that the spasms would do her no harm. Once subsequently, under somewhat similar conditions, she was treated in a similar way by the director who had charge of the gymnasium work. The improvement in her general health and the disappearance of the pain in the back and side were accompanied by an increased alertness and willingness to participate in all the general exercises and games. She returned home, having entirely regained her physical vigor, and from a recent letter we learn that her favorable condition continues.

CASE 12.—H. J., aged 18, had a sprained ankle several years previously and was laid up for some weeks from that cause. A history was given of indefinite pains in the knee suffered at various times; she had had plaster-of-Paris applied and had kept the leg bandaged much of the time. For several years past she had never been entirely free from lameness. When first seen, she could walk only a short distance, using crutches sometimes.

Examination revealed no organic disease in the limb, but there was considerable atrophy. She was allowed to use a light brace for a short time, but was assured that she suffered only

from weakness, which could be cured so that she could leave off her brace. All bandages were removed, massage was given daily, and also, in gradually increasing amount, exercise was given in the gymnasium. The limb rapidly increased in size, the lameness disappeared, and recovery was complete and permanent.

CASE 13.—B. H., a girl aged 15, whom I found in bed looking healthy, bright and well developed. She was the daughter of comparatively wealthy parents, and her mother evidently was over-indulgent. For an indefinite period, probably two years previously, she had been unable to make any considerable exertion, and for some months had not been able to walk more than one block without having pain in her hip and back. On examination, I found no evidence of disease in any joint. There was a very slight postural lateral curvature of the spine. She said that she was free from pain when lying down, and that it was only upon exertion that pain came on. In consequence of this very definite history, which had extended over a long period of time, I refused to make a positive diagnosis on my first visit. Examining on a second occasion, several weeks later, I found the same conditions present. I then made the diagnosis with a good deal of confidence which I had been disposed to make in the first instance—namely, that it was simply a neurosis.

In September last, several months subsequent to my first examination, the girl came into our gymnasium and has remained with us during the year. The time not necessary to be spent with us is spent at a young ladies' college. For several weeks after going there she made a good deal of complaint and had the meddlesome sympathy of the teachers and principal. I found it necessary to speak in very positive terms concerning this matter, assuring them that, so far as her physical well-being was concerned, she was entirely under my charge, that I held myself responsible, and that I must insist upon their carrying out the regulations which I laid down for her if she was to remain in the college. The lady to whom the authorities of the college looked in regard to matters of the girls' health came to see me personally, and finding her a very intelligent and reasonable woman, I had little difficulty in securing her intelligent and hearty co-operation. Since that time we have had clear sailing, and the girl has, during the year, developed into quite a vigorous athlete. She is in the best of health and has unbounded confidence in her own ability to take part in any game or to do any work. No complaints are heard from her regarding pain or disability.

Those who have given most attention to these patients, and have sought to alleviate their ills, will be most ready to admit that great injustice is often done them. When once the conclusion is reached that the train of signs and symptoms manifested is not due to organic disease, but rather due to the psychic attitude of

the patient toward herself, there seems to be a strong tendency to under-estimate the suffering endured and the disability experienced, and in consequence to deal with the patient harshly as if intentional fraud were being practised upon the friends and the medical attendant. On the other hand, the error most commonly made, especially by the friends, is to lay too much stress upon pain and to express an unwise and a misplaced sympathy, which but confirms the unfortunate patient in her wrong course and strengthens the chain of circumstances which make up the vicious circle in which she is moving.

In this connection it would be wrong to free the practitioner from the blame which frequently attends his vacillating course. If uncertain of the exact diagnosis he should have a consultation, or otherwise so strengthen himself as to be able to pursue a course having a definite end in view.

It is unwise and unfair at this point to place too much blame upon those attending directly upon the patient; the difficulties which present themselves, in the effort to sift the true from the false, are so great that it would be unreasonable to expect the family and friends to be able to make the distinction; and the experienced medical man may be taxed to the utmost. When treatment, however, is to be undertaken, this distinction must be clearly made. Exactness of diagnosis is essential and must be the first step in treatment. Next the causes operating to produce a continuance of the disease,—among the most important will be:

(1) Injury to some part generally slight in itself but magnified in importance by some attendant circumstances;

(2) Disease, recovery from which is not recognized, or a consequent disability which is greatly magnified, attended by a fear that the natural use of the part may be harmful.

A large number of the cases seen had their starting point in either of these ways. It is a crucial point to be able to distinguish sharply and to estimate correctly how far we may go in restoring the suspected joint or member to its normal function. I am convinced that the orthopedic surgeon frequently falls into the temptation to continue, to the detriment of his patient, protection of a joint by means of braces much longer than necessary. When it is safe to restore any part to its intended use, it should be done not only in the interest of the part but because of its general effect upon the patient.

(3) *The Home Environment*.—Separation from the surrounding circumstances to which the patient has been accustomed must be practised in the majority of cases. I have not said isolation; for I am convinced that such a course is seldom wise. There may be patients whom it is wise to separate from all the world except the trained nurse and the medical attendant, to be kept in bed, to have massage, and to be dieted in order to increase "fat

and blood," but they are not the cases that the orthopedic surgeon is called to advise.

It is not so much a cessation of activity—mental and physical—that these unfortunates need as it is that their energies shall be directed in right channels, that they shall be led not to think so much of themselves, but to centre their attention upon interests and aims outside of their own personality, in a word to beget in them and to cultivate a true altruism and to suppress a corresponding, a debilitating egotism. The surroundings should be such as to arouse interest, new if possible, cheerful always, having an evident useful purpose, calculated to inspire self-confidence and to suggest personal responsibility. The course adopted should be marked by regularity and system, should not be hap-hazard on the one hand nor fall into mere routine on the other.

It may be that the patient by long continuance has fallen into a state nearly approaching physical and mental imbecility. If so, some one must do the initiatory thinking and assume a control that is akin to hypnotic control, must exert a force of manner and action which will be substitutionary: but at every step of the way the patient must be shown that personal effort is called for and is quite possible and practicable.

"The Weir Mitchell system of treatment marked a great advance in the management of such cases, but it is essentially passive; the active element is wanting. The patient is acted upon by drugs, diet and massage, by the will power and force of character of other persons; but little is done to call out, to educate the volition of the patient. She is kept in bed, secluded from friends who would show an unwise sympathy, fed well, and given massage and rest. In fact, rest is made such a prominent feature of the treatment that his plan is almost always spoken of as the 'rest cure.' It falls short, inasmuch as it is but negative in character. Systematic training to self-reliance and renewed confidence are needed to render the cure effective. Though the patient should seemingly regain health, it is soon found that life is not a negation, but that its problems must be grappled with in a positive manner and solved. Massage, good diet, etc., are important, but in order to establish permanent results the volition must be called into exercise."

Frequent mention made in this paper to the orthopedic gymnasium calls for some explanation as to the place and importance assigned it in the management of these patients. While the general work done is in itself helpful as a means of obtaining exercise, yet it is not chiefly for that reason that it is employed. It has been said that the chief desideratum is discipline and the creation of an ideal toward which the patients may reach, the establishing in each one of a clear conception of personal duty and responsibility, and the confidence that application will reach the ideal

and will insure that the responsibilities imposed by society will be creditably borne. I do not know any means more ready to hand and more efficient as an aid to discipline, more helpful to free, genial, wholesome association with one's peers, than is offered in a properly conducted gymnasium. It is not held that any special movements performed have a specific influence in their treatment, but while these in themselves are helpful, there is a power far beyond this. A successful, tactful director has an opportunity to cultivate an *esprit de corps*, and a concentration of attention upon something outside of self that is not easily secured otherwise. It requires knowledge, good judgment, tact, firmness, and a manifest devotion to the interests of others, to direct this work successfully.

Class work has marked advantages over individual work, as it insures the greatly desired association with other persons, and affords the director the opportunity to bring into full play the pedagogic practices based on emulation.

"Every one who is concerned in directing the treatment of the patient should be imbued with the most implicit confidence that the course pursued is a wise one, and must be followed out with regularity and system. The lives of these patients must be brought very fully under control; no trifling matter must be allowed to stand in the way of carrying out whatever regulations are deemed important. By such influences they must be helped to act with good common sense until they have been enabled to see the folly of their former course, and become inspired with confidence that they can conduct themselves in a rational manner. Gymnasium training continued every day affords an opportunity to exercise the necessary discipline to bring into exercise and co-ordination the faculties and powers tending to produce rational behavior in a healthy individual."

"The principles of treatment employed are not new; the means used in applying these principles have not received much attention. In order to succeed in the management of these cases a prime requisite is a positive diagnosis. A line of conduct which evinces uncertainty and vacillation is fatal to success. The line of treatment to be adopted should be well defined in the mind of the surgeon; his instructions to assistants should be definite, and no trifle should induce him to allow any departure from the prescribed regimen. While the nature of the work to be done and the mode of life to be followed are very important, yet the spirit in which these directions are enforced is of still greater importance. It is essential that the patient form the impression and attain to the firm belief that the surgeon is master of the situation. It is not sufficient to accomplish this to use strong words and confident assertions. His conduct must bear out his professions."

(4) *Heredity*.—Heredity is frequently both a direct and an

indirect cause, first, on account of the natural legacy which it implies, and then because such parents constitute a hurtful environment. This should receive careful consideration in giving a prognosis.

Actual disease or disability should be remedied as far as possible by surgical or other means. The neurosis may not be the only, and possibly not the chief, disease present. If there is cardiac disease, indigestion, flat-foot, curvature of the spine or any other abnormal condition, it should receive the most careful attention, and its removal or improvement will do much to further the attainment of the end desired.

In Case 9 marked contractures of the muscles controlling feet and knees had occurred, and it was impossible to make any progress until this condition was remedied. When there is actual cause present to account for loss of function, it is quite as much an error in treatment to overlook or under-estimate it as it is to exaggerate slight or imaginary ills.

The general physical conditions present should receive attention; for example, the habits as affecting the action of the bowels and the bladder, occupation, diet, exercise, etc. Most erroneous and ruinous practices will often be discovered. In Case 1 reported here a natural motion of the bowels had not taken place for years; the bladder was never empty and no effort was made to empty it, but a urinal was kept constantly in bed with the patient, and the urine was allowed to dribble away. All such conditions must be grappled with by a strong hand and regularity restored.

Nutrition should be carefully considered; such food should be supplied and such regulation of diet should be secured as will insure good nourishment.

In all that pertains to the life of the patient a strict regimen should be maintained. If home influences have been hurtful, friends and relations should not be allowed to visit or correspond with the patient. Association with other patients similarly affected may be injurious, unless it come directly under the eye of a competent attendant. Frivolous and foolish reading and conversation, the officious interference of an indiscreet nurse, or the well intended but meddlesome attentions of other patients may be a source of much harm. The manner of life of the patient for every hour of the day should be known and should be guarded from every harmful influence. Discipline, always kind but clear-cut and unwavering, must be maintained. "The one word which expresses more than any other the dictum of treatment, is discipline; not only the discipline which calls for submission, but that which succeeds in educating the patient to be self-reliant, not simply to follow directions given by another, but to exercise her own judgment and to become possessed of the conviction that

her powers are subject to her own will, and may be made to yield not an erratic, but an intelligent obedience."

Omission of the advocacy of treatment by drugs, baths, electricity, etc., does not mean that the writer undervalues these aids; they have received ample consideration elsewhere.

Education in its widest sense and properly understood as applied to them, contains the greatest hope for these patients; it has within it the germ of all the harvest of good which they may reap. It implies, after the confidence of the patient has been secured, instruction as to the harmful influences which have been at work whether in the home or elsewhere, the formation of habits of diligence, the avoidance of gloominess and moodiness, on the one hand, and of frivolity and sentimentality on the other, an earnest outlook upon society, appreciation of the fact that there is work for each one to do, and victories to be achieved which can be accomplished by application and intelligent, purposeful exercise of the individual will.

**THE TELEPHONIC PROPERTIES OF THE INFLAMED
ABDOMEN: A SIGN NOT HITHERTO DESCRIBED,
DUE TO PARALYSIS OF THE BOWEL
IN PERITONITIS.***

BY GEORGE A. PETERS, M.B. (TOR.), F.R.C.S. (ENG.),

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THE sign to which I invite your attention is, in brief, the prominence with which the heart and breath sounds are heard over the tense, distended abdomen of peritonitis. In auscultating the abdomen with a view to ascertaining whether there were paralysis of the bowel in cases of appendicitis, typhoid perforations, traumatism, and other conditions which stand in a causative relation to peritonitis, I have observed that where the gurgling sounds due to the passage of gas and liquid feces from loop to loop of the bowel by peristaltic action, are absent, the heart sounds are invariably very plainly to be heard over the whole abdomen, from the ensiform cartilage to the pubes, as well as from flank to flank. The breath-sounds are also sometimes audible, and in intense cases, particularly in children, both inspiratory and expiratory sounds may be heard, and while the first sound of the heart is most distinctly audible, the second sound may also frequently be plainly detected. I have made some observations upon the audibility of the voice sounds under the same circumstances, but am not prepared

*Read before the Dominion Medical Association, Montreal, September 17th, 1902.

at present to make any statement thereon, beyond remarking that in one case at least any unusual accentuation was conspicuous by its absence.

It was further observed that in distension of the abdomen, unassociated with inflammatory conditions, such as in flatulence due to indigestion, and in chronic obstruction with great distension of the abdomen, but without inflammation or paralysis of the bowel, the heart and breath sounds are not heard. Neither are they heard in cases of distension due to the collection of ascitic fluid or tubercular fluid unassociated with acute inflammatory conditions.

The facts of the problem under consideration seem to be (1) that the heart and breath sounds are not heard over the abdomen in health—at all events, not below the area of the stomach; (2) that they are not heard in the non-inflammatory conditions of distension above mentioned; and (3) that their prominence in inflammatory conditions is greatest when the gurgling sounds of peristalsis are entirely absent.

The inference from these facts very obviously is, that the condition responsible for the phenomenon is the paresis or paralysis of the musculature of the bowel wall due to the inflammatory disturbance. It is, therefore, submitted that if these observations are verified, the audibility of the heart and breath sounds over the abdominal areas is a sign of value in the diagnosis of paralysis of the muscular coats of the intestine, and also that it has some useful prognostic significance.

EXPLANATION OF THE PHENOMENON.

In an endeavor to arrive at an explanation of the phenomenon under consideration, one may attempt to contrast the intra-abdominal conditions in health with those of disease. It may be taken as true that under no circumstances does the gas contained in the intestine form a continuous column from end to end of the bowel. In health its disposition is governed by the weight of the fluid in each coil, and also by the different degrees of peristaltic contraction in different areas of the bowel wall. Thus, in a healthy condition of the bowel, the gas therein is disposed in certain well-defined and circumscribed compartments, each constituting for the time a complete retainer in itself, with vital walls possessing a muscular tonicity which varies widely in response to impulses from the nerves of the splanchnic plexus. Thus, though adjacent coils necessarily exercise mutual compression on one another, and as a result become so disposed anatomically that the *general* pressure within the abdomen is equal in all directions, the autonomy of each section or enteromere makes it possible that the bubbles of gas in one coil may be under a degree of pressure quite different from that in any of its neighbors, and thus the total

amount of intra-abdominal gas is subdivided into moieties, chemically similar, perhaps, but heterogeneous in character as regards degrees of tension. For example, if the tension in one coil be x units of pressure, that in its neighbors may be a , b , y , or z . This fact, as evidenced by the difference in the pitch and quality of the percussion note in different areas, is demonstrated daily in percussion of the abdomen, and is within the experience of every physician and surgeon. No argument is needed to demonstrate that the sound-carrying power of gas so disposed is reduced to an inconsiderable minimum.

But when there is paralysis of the walls of the intestine, the resulting flaccid and atonic condition of the coils permits, by mutual compression, an entire change in the pressure conditions of the total amount of gas contained within the abdomen. Under these circumstances, all tonicity is lost, and the disposition of the gas is controlled solely by mechanical aerostatic laws. The result is that the coils of intestine containing the gas, instead of being more or less cylindrical, independent, vital containers, become quadrilateral, hexagonal, or octagonal, etc., their shapes depending entirely upon the effects of mutual compression, and the tension of the gas in each coil is precisely the same as that in its neighbors. Thus the entire distended abdomen, from the pericardium and diaphragm to the remotest confines of the cavity becomes, practically and acoustically considered, a continuous column or compartment of air or gas of uniform tension, interrupted merely by flaccid and inert partitions, which, when the tension is uniform on both sides, offer a minimum of obstruction to the passage of sound waves. The result is that every respiratory and cardiac sound is conveyed through this column or layer of air to the ear of the auscultator, or to the mouth of the stethoscope. In fact, the gas so contained constitutes a conductor of sound on the precise principle of the stethoscope. Moreover, its capability of transmitting sound is doubtless enormously accentuated and amplified by the dense board-like condition of the musculature of the abdominal wall, which is almost always present in these circumstances. Also the amount of gas is generally greatly increased as the result of intra-enteric decomposition. The expression, "tight as a drum," is often applied to the abdominal wall in peritonitis, and this no doubt well expresses the condition, for the abdominal wall becomes under such circumstances an exceptionally efficient sounding-board, of the same nature as the drum-head, viz., of a tightly stretched animal membrane.

PROGNOSTIC SIGNIFICANCE.

When first the sign intruded itself upon my observation, I was disposed to think that the prognosis in cases where the symp-

tom was well marked was almost necessarily fatal. But further observation has shown that the symptom may be present even in cases of localized peritonitis, as in the more acute forms of localized appendicitis, in pelvic cellulitis, etc., and that recovery very frequently follows, even though the above-described symptom may be well marked. Sometimes also when the cardiac and respiratory sounds are heard, with considerable distinctness, an occasional peristaltic gurgle may be heard.

Moreover, it has been observed that in cases of temporary paralysis of a non-septic character, such as sometimes follows prolonged aseptic abdominal operations with exposure of the bowels, the sign described is sometimes present for a short period of time. In all these cases, as the sounds produced by peristalsis reappear, the heart and breath sounds progressively recede in prominence. These considerations lead one to infer that the paralysis is probably due to interference with the function of the splanchnic plexus and the nerves distributed from it, rather than to a local effect of sepsis or traumatism upon the musculature of the bowel itself. It would appear that the absorption of septic matter from even a localized peritonitis, such as in appendicitis, or traumatism of the peripheral filaments of the splanchnic area, as in handling or exposure of the bowels to the air during operation, must produce a profound and incapacitating effect upon the splanchnic plexus itself, thus producing the paralysis which leads to the development of the sign described.

In conclusion I would say that after a pretty extended period of observation and study of the sign under consideration, it is my opinion that the distinctness with which the heart and breath sounds are heard over the abdomen bears a direct relation to the degree of paralysis present, and if the paralysis be due to sepsis, as is usually the case, the prominence of the symptom has high prognostic significance.

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CAESARIAN SECTION TEN MINUTES AFTER DEATH OF THE MOTHER—CHILD ALIVE.

BY W. J. FLETCHER, M.D., T. S. WEBSTER, M.D. AND W. J. WILSON, M.D.

Mrs. T., aged 35. As a child had measles, but none of the other diseases of childhood. All her life was subject to sick headache and dizzy spells, but considered herself healthy. Had a great deal of indigestion, and was always constipated. Had hemorrhoids. Has been married twice, in all fourteen years. Pregnant for the third time, about eight months. Previous pregnancies normal. For first three or four months of last pregnancy vomited a good deal, but had no treatment for it. On October 16th last had an unusually severe attack of headache and sick stomach, which lasted, with short intermissions, for four days. After this felt well with the exception of dizzy spells more or less every day.

Nov. 11th, at 4.30 p.m., while engaged cooking supper, was seized with vomiting. Her dinner came up undigested. She lay down on a lounge and became unconscious, and Dr. W. J. Fletcher, of Euclid Avenue, her family physician, was called. He found patient unconscious and pupils very widely dilated. After about five minutes she recognized doctor and friends, and complained of severe pain in her head and sick stomach. She then lapsed into a deep coma. Some urine was drawn by catheter, and found Sp. Gr. 1020 acid, and no albumin. This was the same as on several previous examinations.

Dr. T. S. Webster was called at 9.15 p.m. in consultation, when cerebral hemorrhage was diagnosed and emptying the uterus suggested. Preparations were being made for this, and Dr. W. J. Wilson was telephoned for by Dr. Webster, who had gone over to the Western Hospital. On his return with Dr. Wilson, Dr. Fletcher said patient had been dead about ten minutes. On examination the foetal heart could be heard.

Cæsarian section was rapidly performed. The Patient died at 10.35 p.m. The child was removed from the uterus at 10.45. The cord was cut and let bleed for a while. The blood from it was very dark. Artificial respiration was resorted to and the lungs inflated by blowing in the mouth. For the first five minutes the only improvement was a better heart-beat as heard by the stethoscope, then a faint effort at respiration, and after forty minutes' steady work the child was breathing freely and was handed over to the nurse.

The child lived twelve hours. The result might have been better for child if delivered sooner, as suggested by Dr. Fletcher, but the friends would not at that time consent to the section.

Selected Articles.

A BRIEF REVIEW OF SOME OF THE TUMORS OF THE PERIPHERY OF THE BODY, THEIR PATHOLOGICAL CHARACTERS AND TREATMENT.*

BY THOMAS H. MANLEY, M.D., PH.D., NEW YORK CITY.

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My aim in the present undertaking is not so ambitious as the title implies, since this would in a large measure embrace the whole field of oncology. My purpose is rather to consider briefly some of the dominant characters of a few new formations which originate in the integument or lie in close relation with it; some of an ordinary benign, and those of a malignant type. Their finer morphological or mixed characters will be passed over, nor will that controversial aspect of the subject, their causation, be entered upon. Deep visceral and very rare growths will not be considered, and no attempt will be made in the matter of classification.

Regionally, these neoplasms may be divided into those of the *head, neck, trunk, and extremities.*

THE HEAD.

New growths over the cranial walls, of any description, are comparatively rare; malignant tumors are almost never seen here; wens, sebaceous or serous cysts are, however, not very frequent. But even these seldom occur except in those past middle life as a rule; nor am I aware that they ever undergo malignant changes. One case of a large fungous fibro-cystic tumor of the scalp has come under my care in an aged, retired clergyman. It was destitute of a hairy covering, and was so eroded on the surface that it bled freely on the least friction. On excision the parts healed kindly.

Gummatous tumors of the scalp, or those lodged in the diploëic spaces, are not infrequent in specific disease. The scalp is a very highly vascular structure and prone to erysipelatos invasion, in wounds and operations on diabetic patients.

Nevoid tumors of the scalp are not very infrequently seen in infants. This form of angioma tends towards spontaneous dispersion in nearly all cases.

* Read before New York State Medical Society, at Albany, January 28th, 1902.

Although *lipoma* is almost invariably a *subcutaneous* growth, one rarely or never encounters it in any part of the scalp; possibly the general absence of fat in the connective tissue elements may explain this circumstance.

THE FACE.

Small, non-malignant growths involving the glandular elements of the cutaneous envelope of the face are quite common; they are mostly congenital moles, papillomata, or sebaceous cysts. The latter, under the designation of chalazia, often involve the Meibomian glands in the subconjunctival tissues of the upper eyelids. These diminutive nodules scattered over various areas of the face are obnoxious, rather as a cosmetic blemish, than for ever being a source of inconvenience, except occasionally after middle life, when the papillomata may degenerate into malignancy. Angiomata of the various types may occupy any area of the face, and unlike those of the scalp, they tend with age to augment in area and never undergo spontaneous dispersion. Lipoma, teratoma, and cystic neoplasms are uncommon over these exposed parts, at least, in early life.

Malignant growths of the facial structures are clinically of three varieties: (1) those invading integumental structures; (2) those occupying the lower lip, and (3) those forcing their way through from the underlying osseous parts. In periosteal sarcoma of the facial structures a tumor may attain enormous dimensions without inducing gangrene or ulceration of the integument.

Labial epithelioma presents some remarkable peculiarities. I have never seen a case in which this type of epithelial hyperplasia involved the upper lip. It is quite invariably restricted to the male sex, as is esophageal cancer. Its *permanent* destruction in the early stages is simple and certain, in nearly all instances, without any description of cutting operation. The simultaneous tumescence or infiltration of the submaxillary glands present in many of the cases, arises rather from a transmitted irritation by the absorbent vessels than by a consecutive epithelial dissemination, as is commonly thought, because when the local ulceration is once soundly healed this adenoid tumefaction promptly vanishes.

Lupoid growths present many of the clinical aspects of malignancy.

THE NECK.

We may define the neck as that isthmus which connects the head with the trunk; bounded anteriorly by the upper border of the sternum and the lower border of the chin; laterally by the lower border of the inferior maxilla and upper border of the clavicle; posteriorly by the occipital protuberance above, and the first dorsal vertebra below.

In no other region of the body will we find new growths so numerous and so various, except the female pelvis, congenital, inflammatory, or neoplastic. Sarcoma is not very uncommon here, but primary cancerous growths very seldom bud forth from any of the epithelial elements of the neck.

The *cervical tumors* may be clinically and pathologically divided, in a general way, into three classes. First, the infective adenomata of infancy and childhood; second, the cystic formations, branchial and other varieties of adult and middle life; and third, the malignant, or those of advancing years.

Scrofulous tumors.—These are tumefactions of early life lodged in any of the cervical triangles, and are superficial and deep. A large proportion of them spontaneously disperse; others go on to suppuration with more or less destruction of the lymph nodes; while in some caseation or calcification occurs, with ultimate death of the infectious bacteria and resorption of the residue of suppuration. When these tumors are permitted to go on to suppuration they sometimes break through the integument with very disfiguring effects. Whether these processes ensue from infection primarily through a mucous ulcer, or through hematogenous contamination, is yet uncertain. It is, however, altogether probable that the predisposing cause is a cachexia, inherited or acquired. In any event, they rarely, if ever, imperil life from a dissemination of their morbid elements by way of the circulation.

Branchial, thyroid, retention or other cysts usually appear after adult years are attained. The mucous cysts of a branchial origin usually leading into the pharynx, or the colloid variety so common in the thyroid body, for some unknown reason occur with rare exceptions in the female sex. We may usually recognize the true character of a branchial cleft giving rise to a tumor by its tendency to periodically open and close; moreover, its discharges, besides corpuscles, contain pavement epithelia and mucous globules. The cysts may open through any of the cervical areas as low down as the sternum. Branchial passages may originate from the pharyngeal vault, pursuing a most tortuous course, and open through the integument; they may be incomplete, *i.e.*, closed at the inner or at the outer orifice, or both openings may be closed and the secretions confined, as in a retention cyst.

Thyroid cysts.—Serous or colloid cysts of the thyroid are generally unilateral. They vary in volume, are commonly single, and sometimes exercise so much pressure as to lead to the complete absorption of the lobe involved. They may displace the trachea and impede respiration, but seldom, if ever, lead to dangerous tracheal stenosis; nor does it appear from the literature of the subject that cystic disease of the thyroid ever so impairs the function of the gland as to lead to myxedema, so commonly noted where there is parenchymatous degeneration. When these cysts attain consider-

able volume, very large arterial trunks penetrate their thick investing membrane. Several of these cases have come under my notice which underwent marked retrogressive changes. This was most noteworthy at the menopause. They rarely took on purulent or inflammatory changes. Various types of cystic disease may occupy any of the antero-lateral areas of the neck. One of the most noteworthy is the remarkable form of congenital cysts which is situated at the inner aspect of the sterno-mastoid, at its sternal head, and is an infective factor in producing wry-neck in infancy. Fibrous, fibro-cystic and fatty tumors abound in these areas. I have encountered a peculiar type of rapidly recurring fibroid tumors, sometimes arising in the periosteum of the lower jaw or in close proximity to the parotid gland. In one case, operated on by me, the growth very rapidly recurred, and attained the size of a large California orange. On section it was found to consist mainly of smooth muscle fibre, in a coarse fibrous reticulum. It had a thick capsule without any very intimate adhesions. An experienced microscopist assured me that it had the common characters of a uterine myoma. It may be added that now, after an interval of five years, there has been no recurrence.

The greater number of benign neoplasms of the neck take their origin from beneath the deep cervical fascia, under the thinnest part of the integument and over the course of the larger blood trunks.

Malignant growths.—Malignant formations, exclusive of lympho-sarcoma, are rarely encountered in any area of the neck, except as a consecutive invasion.

Periosteal and fibroid sarcomata are not very infrequent in the submaxillary areas. These masses may attain considerable volume and impede respiration or deglutition.

Lympho-sarcoma is diffuse, always attended by a widespread infiltrate of round cells into every kind of tissue contiguous with it. It begins in an isolated lymph ganglion and rapidly extends into the whole superficial and deep chain. The skin overlying these masses is tawny, thickened, and so infiltrated as to constitute an essential part of the hyperplasia. The tumor is fixed, hard and indolent. Pain and distress only result from the pressure on nerve trunks and on the tubular structures passing through the neck. In all cases of this character coming under my observation the new growth was unilateral; in all but one the tumor was anterior to the mastoid process, some of them involving the parotid or the sublingual gland. In one case, an aged French Canadian lady from Troy, the growth was in the posterior cervical triangle, freely involving the trapezius muscle and extending under the cerebellar fossa of the base of the skull. In another case of a man of sixty-five, an adeno-sarcoma in the anterior triangle was so widely infil-

trated that in its incision the greater part of the sterno-mastoid muscle had to be taken away with the growth.

Carbuncle.—New growths rarely appear on the posterior aspect of the neck, but it is a favorite site for a very dangerous and destructive form of furuncle. This lesion, though infective and suppurative, should most certainly be included with neoplasms. It is true that it is essentially inflammatory; but so are lupoid and actinomycotic formations, and some believe that cancerous are also. Moreover, carbuncles may assume many of the physical characters of malignant action; they tend toward widespread diffusion and gangrene; they are accompanied with profound constitutional disturbances and excruciating pain. Like cancer, their local action is undoubtedly predisposed by a vice of the constitution; glycosuria usually co-exists.

Carbuncle begins as a minute papule which, if not destroyed early, soon attains to large dimensions, its base and borders being of the hard, cartilaginous consistence of true scirrhus. Pus burrows largely under the very thick and dense integumental investment.

THE THORAX.

Lipoma, keloid and epithelioma appear with greater frequency over the thoracic surface areas than elsewhere. The special sites of tumefactions and new growths are the axilla and mammary glands in women. The lymph ganglia become very commonly tumefied without any definite cause, without any apparent focus of local infection, within the radius of the lymph vessels converging here. Sometimes they break down and suppurate, and, again, undergo spontaneous resolution. In cases of phlegmon, felon, or infected sores of the upper extremities, these nodes may become markedly swollen, to resolve and vanish with the subsidence of inflammation in the distant parts. Tumefaction of these nodes is quite invariable in all neoplasms of the mammary gland, whether they be malignant or not. After the destruction or avulsion of the mammary tumor they again frequently subside to their normal contour. On the recurrence of the disease these glands again enlarge, assume a stony hardness, and often break down. Just what role these ganglia in the axilla play in the progress of cancerous disease of the breast is by no means clear, although it was recently supposed that they acted as depots for suffusion, and were early infiltrated by specific cancer cells; hence, with the ablation of the mammary gland, the axilla and supra-clavicular spaces were cleared of these.

Observations have, however, demonstrated that the procedure in no manner whatever influences the recurrence of malignancy or prolongs life.

THE RESECTION OF THE AXILLARY AND SUPRA-CLAVICULAR
LYMPHATIC NODES A USELESS MUTILATION IN
OPERATION FOR MAMMARY CANCER.

M. Paul Raymond, Desnos and Condry (*Revue Des Maladies Cancereuses*, Nov. 20, 1901), all unite in declaring the removal of tumefied absorbents in cancer as a needless and often harmful procedure. Raymond well observes, that the mere tumefaction of the gland by no means implies that it is the seat of cancerous infection: First, because cancer is certainly not an infectious disease. Second, because the ganglia are a defence against the passage of lethal elements into the circulation. Third, that since the teaching of Metchnikoff, it is well known that cancer cells, as well as others, secrete a toxic substance arrested by the lymph-glands.

Hence, the rational inference is, that we should leave these nodular structures undisturbed. Remove the cause, says this author—the site of active malignant action—and the intumescence will promptly disappear. Moreover, he adds that a critical study of metastatic invasion will readily demonstrate that the general channel of diffusion is the circulation. In the epitheliomatose melanotic, a type we regard as the most malignant and infectious, we note no implication of the lymph-nodules; and “perhaps,” adds M. Raymond, “because of this loss of defence action of the absorbents, we observe the disastrous course of this form of the disease.”

Dr. E. Desnos records an example of not only wide-spread tumefaction, but suppuration and sloughing in the inguinal lymphatics, in a case of cancer of the verge of the penis, in a man of 47, in which, after excision of the ulcerated verge, the disease action in the groin promptly cleared up. The author says, that the disease appeared six months previously in the form of vegetations; pain was atrocious with erections. Cautery aggravated the trouble. A vast adenopathy widely occupied both inguinal regions, extended into the thighs, the lower part of the abdomen and prepubian regions. Desnos says, “I did not touch the ganglia, as I knew it would be impossible to enucleate so wide-spread and deeply infiltrated a mass.”

After excision of the verge, the specimen was examined by M. Brault, who pronounced it epithelioma. The patient, who survived six years, had no relapse.

In fact, adenopathic tumefaction conveys no more significance in a cancerous than a chanerous ulcer. Remove the source of irritation and tox-irritation. The glands will subside of themselves.

Mammary tumors contribute a large share to operative surgery. The benign type of mammary tumor is varied and numerous, the most dominant being dermoid or fibro-serous cysts, or intumescence from deep-seated tubercular infiltration. The latter is commonly entirely without marked constitutional disturbance.

I have seen both of these simple lesions treated on the lines of malignancy, with the dreadful mutilation of modern operations for malignant disease of the lacteal gland. Diagnosis is sometimes attended with difficulty here, but time and patient study of the case will generally dispel doubt. The symptoms may deceive the careless and inexperienced, and no one will abide by the microscopical examination of sections without the confirmation of the clinical history.

Malignant disease or fatal tumors of the breast are, unhappily, only too common, and it is hard to conceive of a more dreadful affliction. The sufferer is entirely doomed, absolutely no hope remains of complete recovery from the disease, though fortunately, in a considerable number, a few years' grace is permitted, or recrudescence may only light up after a very long period of latency, meanwhile an intermittent disease may carry the patient away. No single instance of permanent recovery has ever come under my notice in mammary cancer, however treated; the nearest to it was an old lady of seventy-six years, who had an atrophic scirrhus of the left breast of twenty-three years' duration; it yet presented an open ulcer, discharging an odorless, serous fluid, but of the gland only a small nodule remained. In only one patient, a woman of thirty-six, who had borne six children, have I seen simultaneous scirrhus of both breasts; here the disease ran a very acute course, taking on the form of cancer *en cuirasse*.

Keloid, or so-called "spurious fibrous tumor," is sometimes seen over the superior areas of the thorax. It appears in welts or large, hard, raised ridges, at times covering a large area. This curious lesion is most frequently noted in scars after wounds or burns, and is said to rapidly recur; but one of the largest keloids I ever saw, lying over the right subclavian region of a young man, was entirely spontaneous and after free excision never recurred.

THE ABDOMEN.

Growths which appear over any of the areas of the lower segment of the trunk are almost invariably of an intrinsic origin, *i.e.*, they spring from some intra-abdominal organ or structure, or, perchance, are largely made up of the organ itself. External to, and independent of the aponeurosis, growths very rarely occur. Lipoma is the most common tumor found here, though even this often presents a most delusive superficiality, as on dissection we will discover in very many that it is lodged deeply in the inter-muscular planes, or even extends into the subperitoneal space.

Cancerous growths rarely appear over the abdominal surfaces. However, a year ago a case came under my care of colloid cancer in the integument just above and to the right of the umbilicus. It consisted of a hard node which had projected through the skin, presenting a granular, highly vascular surface, bleeding on the

least friction. Surrounding it was a zone of purpuric papules deeply discolored by a dark pigment. On excision the parts were divided wide of the growth, which infiltrated not only into the parietal peritoneum, but also into the underlying omentum as well. The parts united promptly; signs of generalization and metastatic invasion of the liver and stomach were in evidence. Three months after the operation she died.

THE TESTES.

The testes and spermatic cords are appendages of the abdomen. Neoplasms of the most diverse forms abound here. Several of them present the histological characters of those arising within the ovary and broad ligaments of the female. The most frequent and notable enlargements in the scrotum, not of an acute inflammatory form, are from *serous formation*, and *serous cysts*. The former may occur as an effusion into the infundibular fascia of the cord or into the tunica vaginalis; the latter occur most commonly in early infancy and late in life. The cysts most numerous begin in the epididymis, in the hydatids of Gerales, or the Wolffian bodies. They present many of the general characters of a hydrocele, but as their effective treatment differs widely from that called for in serous effusions, their correct diagnosis is of great importance.

One of the most common and serious enlargements of the testes arises in consequence of tubercular suppuration. After it breaks its way through the overlying investments, and the ruptured fibrous envelope of the glands permits its pulpy parenchymatous substance to escape, a large, vascular, fungating surface presents, very similar to the cauliflower excrescence of cancer. In the greatest number of this class, the primary infection is in the epididymis. Cases of tubercular testis are very frequently purely local affections, though we will occasionally encounter them when the lungs are involved.

Dermoid Cysts of the Scrotum and Testis. Dermoid cysts of various types are found in the scrotum. They are said to most usually spring from the base of the spermatic cord where the epididymis joined the testis, in the vestigial relics of the Wolffian bodies.

They may have very thick capsules, are indolent and grow slowly, being composed of highly organized structures. They seldom take on purulent changes, though we have reason to believe that in early life very many of them undergo atrophic interstitial changes and disappear by resorption.

A most remarkable case of a vast dermoid cyst springing from the epididymis came under my care, four years ago, in a man of sixty-three years. The mass weighed over four pounds, and was accompanied by an inguinal hernia of the same side. The vast

mass was supported and borne about by a leather sling suspended from the shoulders.

Varicocele, lipoma, bubo and abscess in the inguinal regions in the male may present so many and complex features in common with hernia that none but the most cautious and experienced can differentiate one from the other; again, any one of these tumefactions may coexist with hernia.

THE FEMALE ABDOMEN.

When a woman speaks of having a lump over any of the ventral areas, we almost instinctively suspect either a hernia or a tumor of pelvic origin; but there are masses presenting at her abdominal outlets which are neither. The most important and interesting are those which appear at the outer aperture of the canal of Nuck, those thick-walled serous cysts which are often trussed for years under the assumption that they are "ruptures." They appear most frequently in those who have never borne children, and are commonly found on the right side. They are diminutive in volume, very sensitive, and more or less painful at menstruation. They may appear alone or may be complicated with an epiplocele. An early recognition of these cysts will lead to a permanent and effective cure.

VAGINAL OUTLET.

Growths of the vaginal outlet are not numerous. Of the benign, one of the most frequent is a small, papillary, highly vascular tumor about the size of a small pea, situated in the vestibule at the margin of the meatus urinarius. This fleshy excrescence, or *caruncle*, may be the cause of great distress in urination, and the signs of its presence may be misinterpreted for those of vesical disease.

Venereal condylomata, sometimes sprout out in great cauliflower masses from the labium majus. In a young woman of twenty years, I have seen one of these masses as large as the two fists.

In the submucosa of the labia various cysts occur. A most remarkable example of a branchial cyst came under my care several years ago, appearing near the fourchette, its canal extending far up the inner wall of the vagina.

Primary cancer may invade any area of the vulvar outlet.

VERGE OF THE ANUS.

At the anal outlet, and the tissues contiguous thereto, but few new growths occur, exclusive of hemorrhoids or condylomata. Some few remarkable examples of branchial clefts appear there. In one of my own cases the enclosed Wolffian duct was large enough to admit the little finger, and extended up along the pos-

terior wall of the rectum six inches, but had no communication with the intestine. It freely secreted an opaline, glairy substance devoid of any fecal admixture. These are known as sacro-coccygeal, tubular, dermoid cysts, or post-anal gut. There can be but little doubt that no inconsiderable number of cases of so-called "fistula in ano" in vigorous young subjects belong to this class of pathological conditions.

THE MEMBERS.

These appendages of the trunk, the upper and lower extremities, are rarely the site of any kind of large benign growths. The most notable examples of large neoplasms encountered at the articulations or in the bone shafts are large gummatous nodes, or osteo-sarcoma in the cancellous tissue of the heads of the large bones. Osteo-chondroma most frequently seizes on the phalanges, sometimes attaining very large dimensions and occupying more than one finger simultaneously. They are invested by cartilage and lie deeply in the same substance.

Bursae mucosae. Among the many benign formations seen on the surface areas of the limbs those connected with the synovial structures are the most numerous. These are the housemaid's knee and the bursae mucosa, so commonly seen along the course of the flexor and extensor tendons at the wrist. They may occur at the elbow or even the trochanter major. The distended, inflamed bursa over the patella may occur in the male as well as in the "housemaid." The etiology of these pouches is somewhat obscure, though they rarely appear except among working people. Ganglia at the wrist or dorsum of the hand are seen with equal frequency in both sexes. They are usually freely movable, and lie superficially in their external aspect. They sometimes provoke troublesome neuralgic pains in the fingers with weakness and stiffness in the wrist or fingers. Many of these ganglia disappear spontaneously, others persist for years. Some of these result from a rupture of the tendon sheath or spring from the carpal or wrist-joint.

After about twenty-seven years' experience in practice, private and public, I cannot recall ever having seen an example of primary cancer involving any of the tissues of the members. Gummatous tumors here are frequent in those suffering from specific disease, most commonly, however, in the lower extremity.

The heads of the larger bone shafts are at times the seat of diverse neoplasmatic or hyperplastic changes which greatly augment their volume and tumefy the overlying soft parts. To readily differentiate one condition from the other is often a task of great difficulty, but it must be accomplished in order to make room for rational therapeutics. These pathological conditions comprise: First, *tubercular infection*, so frequently seen in chil-

dren; second, *suppurative osteo-myelitis*, consecutive to the infliction of trauma. This is seen to best advantage in the head of the tibia, not infrequently after so-called injury to the knee-joint; third, *malignant disease*. Under an erroneous impression as to the pathological processes in a case of this class, I have known a surgeon of experience condemn such a limb to amputation. He assumed that the case was one of osteo-sarcoma, the most destructive malady of the osseous system known. It is peculiarly a disease of early life, in the young child appearing in the distal head of the tibia. In former times this was designated "*spina ventosa*." Later in life its favorite site is the femoral shaft. This type of neoplasm, when it attacks the bones of the extremities, is quite inevitably mortal, though an early amputation will, in general, prolong life.

TREATMENT.

A very great aid in the therapy of tumors is an intimate acquaintance with their natural history, the influences of heredity, the effects of local and constitutional conditions, and their pathological characters. Very many surface growths disappear of themselves; others remain throughout life unchanged; some vanish after acute local changes involving the parts where they are lodged; others again, after varying periods of quiescence, undergo malignant changes of great augmentation in volume.

Professional aid is never sought for in this class of cases, unless the excrescence constitutes a blemish in exposed parts, unless it becomes a source of discomfort, or apprehension is excited by a notable increase in size.

Treatment is *constitutional* or *local*, or both combined, in various types of *non-malignant*. In others the resources of surgery are invoked. The aim in view is to destroy the tumor by the *safest* and *simplest* means. In the hands of an experienced operator, with all the modern accessories of surgery, immediate excision is the ideal treatment for those growths which resist constitutional measures. But there are many who have an instinctive dread of any sanguineous procedure, however trivial. The prejudices of the individual must be respected; besides, we should never overlook the possible danger attendant on anesthesia.

In those refusing excision by the scalpel, we may often resort, with signal advantage, to sclerogenesis, or parenchymatous injections, which will provoke suppuration, or, on the other hand, promote absorption. Many small, papillomatous, cystic or vascular growths may easily be destroyed by corrosive acids or the thermocautery. Electrolysis, or the alternating faradic current serves an admirable purpose in a large group of cases.

In operation on *exposed parts*, as the face or neck, it is highly important, especially in the female, to leave the smallest possible

scar. When the growths are diminutive and lie near the surface, local anesthetics, cocaine, cocaine, or chloride of ethyl spray, will quite completely supersede pulmonary anesthesia.

In labial epithelioma my preference in nearly all cases is for the *escharotics*, the acid nitrate of mercury being the most satisfactory. It may be repeatedly applied with a glass rod. It acts with special energy upon the neoplastic elements, and is followed by a scabbing over of the ulcer. This mode of treatment is more or less painful and may be tedious, but in my hands in cases of early lip-cancer it has never failed.

Excision is a much simpler and more prompt mode of treatment, but it always involves the removal of more or less healthy tissue, leaving a deformed and tightly-drawn lip. I am confident that if the profession would more frequently avail itself of the chemical caustics in cutaneous neoplasms we would greatly narrow the field of cancer quacks, and induce many to submit to treatment who will otherwise refuse any cutting operation.

From the neck we come to the thorax, to parts concealed by garments, and where we are less influenced by cosmetic effects than durable results. For this very reason, in parts that are covered we are seldom called upon to remove growths unless they are a source of suffering or have attained a large volume.

The first and fundamental step in the operative technique in the excision of tumors in covered parts, is a large incision through the skin and fascia. Effective hemostasis is second; the remainder of the procedure is a matter of detail.

In operations on the breast we must have a care that we do not mutilate our patient, and should not forget that this gland is an integral part of the generative system. Hence, we should not hasten to cleave it from the body until we are assured, beyond all possible doubt, that it is the seat of malignant disease; for a large proportion of new growths in the breast or at its periphery are benign, and should be enucleated without sacrifice of the gland. In the observance of the new propaganda of "cutting early and cutting wide," in tumor excision, there is great danger when we essay to operate on neoplasms of dubious origin, as so very many are in their early stages.

In malignant growths of the mammae, I have not yet been able to convince myself of the justifiability of those enormous sacrifices of tissues and structures made necessary by a theory which is based chiefly upon unsupported speculation; particularly when I notice recurrence equally early in these cases as when the chest wall is spared. The displaced shoulder, the neuralgic, heavy, bloated, nearly useless arm, left after these wide dissections, present a gruesome spectacle in all, but is the more melancholy in the wage-earner or the mother of a family.

Tumors of the abdomen are treated on the same general lines

as those of the upper trunk. But, in the groin or scrotal cases, rational therapy rests almost wholly on the differential diagnosis between hydrocele of the infundibular fascia or the tunica vaginalis, cystic disease or hernia.

I have found cysts of the scrotum to occur very much more frequently than is generally thought. Very often they are tapped under the assumption that they are hydroceles; several of such cases have come under my care in which the cysts were enucleated entirely free from the tunica vaginalis.

In the enucleation of these cysts we will frequently discover various elements of the cord, so intimately blended with the thick capsule that a very delicate dissection is necessary in order to safely isolate them.

Tumors involving the members are dealt with on general principles. Here one may simply induce artificial ischemia and operate in a bloodless field: moreover, we may largely dispense with pulmonary anesthetics. If we begin with a safe groundwork of *accurate* diagnosis and observe to the utmost the principles of modern osteo-plastic methods in dealing with diseased bone elements, the best possible results will be obtained.

The correct management of thecal ganglia, or bursa mucosa, calls for more than passing notice. The opening of a synovial membrane by accident or art is never a trivial matter, and all these bursæ open either directly into a tendon sheath or directly into the capsule of a joint. This explains why we should endeavor in all these ganglia at or near the wrist to rupture them by concussion force rather than attempt to dissect them out. When their investing capsule is thin, a moderate blow will rupture them, and there is little more to do; but sometimes their capsule is very thick and resistant, and these simple means will not avail. Then we must treat them by free incision. Enucleation of them is difficult and is usually followed by widespread inflammation, sometimes of a grave character. Aspiration or injection is neither safe nor satisfactory. In my experience, in this class nothing answers so well as a free incision and evacuation of the contents. After evacuation under rigid asepsis, a simple moist dressing is applied, and the wrist fixed in a splint and kept severely quiet until repair is well advanced.

In housemaid's knee, on the contrary, complete excision, with simple dressings and rest to the joint, offers the best possible mode of treatment.

Removal of tumors of the neck is always a procedure not to be lightly undertaken. Their surface characters, their apparent superficial location, and their free mobility are most delusive features to the inexperienced. Quite invariably they maintain close connections with the large, deep blood trunks, with highly important nerves and other structures. In all these cases it is well

to make a free incision through the integument and deep fascia, so that vital parts be laid bare under the naked eye.

The formidable danger here is *large hemorrhage*, something which can never occur in experienced hands, and under proper provisions.

Inoperable tumors. In this situation, as elsewhere, there are at times *inoperable tumors*; "when fools rush in where angels fear to tread;" wherein the conscientious and experienced decline to participate in a tragedy, or rob the afflicted of her few remaining days. Operating in this sad class brings more discredit and contempt on legitimate surgery than are compensated for by its many brilliant triumphs.

Carbuncle, always a painful lesion and sometimes dangerous to life, may be nipped in the bud, so to speak, or arrested in its early ravages, by a simple and never-failing remedy, displacing altogether deep bisection or the more formidable procedure of excision. The hypodermic employment of pure carbolic acid here is a specific. In the papillary stage the deep injection of one or two drops of carbolic acid will at once abort any further advances, but even though the purulent stage is reached, multipuncture and injection will instantly annul the excruciating pain and arrest further spread of the infection. Its action is escharotic, coagulating the albuminous elements of suppuration, and inhibiting any further microbic action. After its employment in advanced cases, we employ emollients until the necrotic tissue is thrown off and the ulcer has healed.

DR. J. ASSHETON FLETCHER has removed to 1215 College Street.

DR. and MRS. W. A. YOUNG returned a week ago from New York City, where they spent ten days most pleasantly.

WE are pleased to know that Dr. L. L. Palmer is recovering from his recent prolonged illness.

Dr. D. BROCHU, Professor of Internal Pathology at Laval University, has been appointed a member of the French Academy of Medicine by the French Government. Dr. Brochu is the chief editor of *Le Bulletin Medical de Quebec*, and an able writer.

WE notice with satisfaction that at the International Congress of Gynecology and Obstetrics, held at Rome 15th to 21st of September, 1902, Dr. M. T. Brennan, of Montreal, was nominated Honorary President of the Congress for Canada. Dr. Brennan is chief editor of our Montreal contemporary, *La Revue Medicale*.

THE *Detroit Medical Journal* November, 1902, abstracts our November article "The Proportion of Doctors to Population in Canada and Canadian Cities, and in Certain Countries and Cities of Europe", but wrongly quotes the number of doctors practising in Canada. They number 5,417, and not 1,417 as stated by our contemporary. It is doubtless a typographical error.

The Law of Hippocrates.

THE ΣΑΛΩ

MEDICINE

is of all the Arts the most
needed; but, owing to the igno-
rance of those who practise it, and
of those who, inconsiderately, form
a judgment of them, it is at pre-
sent far behind all the other arts.
These mistakes appear to me to
arise principally from this, that in
the cities there is no punishment
connected with the practice of
medicine (and with it of surgery)
disgrace, and that does not hurt
those who are familiar with it.
Such persons are like the figures
which are introduced in tragedies,
for as they have the shape, and
dress, and person of appearance
of an actor, but are not actors;
so also physicians are many in
name, but very few in reality.

WHOEVER

is to acquire a competent
knowledge of medicine, ought
to be possessed of the fol-
lowing advantages: a natu-
ral disposition; instruction; a
favourable position for the study;
early tuition; love of labour; vigi-
lance. First of all, a natural dispo-
sition is required; for, when Nature
opposes everything else is in-
vain; but when Nature leads the
way to what is most excellent,
instruction in the art takes
place, which the student must

try to appropriate to him-
self by reflection, becoming an
early pupil in a place well adapt-
ed for instruction. He must give
being to the soul a love of labour
and perseverance, so that the
instruction taking root may bring
forth proper and abundant fruits.

INSTRUCTION

in medicine is like the culture of
the productions of the earth. For
our natural disposition is, as it
were, the soil; the tenets of our
teacher are, as it were, the seeds;
instruction in youth is, like the
planting of the seed in the ground at
the proper season; the place where
the instruction is communicated
is the food imparted to vegetation;
by which arises more different study is
like the cultivation of the field; and
it is time which imparts strength
to all things and brings them to
maturity.

HAVING brought all these requi-
sites to the study of medicine, and
having acquired a true knowledge
of it, we shall thus, in travelling
through the cities, be esteemed phy-
sicians not only in name but in real-
ity. But inexperience is a bad trans-
ure, and a bad fund to those who
possess it, whether in opinion or in
reality, being devoid of self-reliance
and contentedness, and the nurse
both of timidity and audacity. For
timidity obscures a want of pow-
er, and audacity a want of skill.
There are, indeed, two things, knowl-
edge and opinion, of which the one
makes the possessor really to
know, the other to be ignorant.

Those things which are sacred,
are no less imparted only to sacred
persons; and it is not lawful to
impart them to the profane, until
they have been initiated in the
mysteries of the science.

HIPPOCRATES

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The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. XII.

TORONTO, DECEMBER, 1902.

NO. 6.

Editorials.

LAVAL UNIVERSITY AND THE RODDICK BILL.

A LENGTHY article in the September issue of *Le Bulletin Médical de Québec* voices the uncompromising hostility of Laval University to the Roddick Bill. The gist of the article may be summed up in a few words: If the Roddick Bill becomes law, the matriculation examination in the Department of Medicine of McGill University will be recognized as the standard for candidates presenting themselves before the Dominion Medical Board. Being a low one, this standard will attract all the would-be medical students of Québec,

and Laval University would have to console herself with students of theology. Therefore, the Roddick Bill must be opposed. The editor's closing remarks are suggestive :

"The conclusion to draw from an examination of the Roddick Bill is that the petty advantages it promises are no compensation for the inconveniences and disorder which it would cause, and still less, for the renunciation of the privileges conceded us by the Federal Act, and for these reasons it cannot be accepted. We may argue about this or that particular clause of the bill—a matter of slight importance ; its principle, which is centralization of instruction—medical federalism, is brought forward in contempt of our educational privileges, of the autonomy of the Provinces, of the free expansion of the French Canadian minority, and everyone should bring to bear every influence to prevent its sanction by the Provincial Legislature."

After the tocsin has been rung, in this decided manner, from the summit of the citadel, we may expect to see the Roddick Bill received by the Legislature of Quebec, at its approaching session, with frigid courtesies, and, after a brief discussion, hurled into exterior darkness.

Logically, however, French Canada should not, in the light of her recognized advantages for a superior collegiate education, place herself in a reactionary position on this question. The Roddick Bill, supported by the French Canadian minority, as well as by their English-speaking countrymen, and adopted by each, and every Province of the Dominion, would confer notable advantages on all Canadian physicians, (1) Freedom to practice in any part of the Dominion. (2) The probability of obtaining recognition for a Canadian medical diploma in the United Kingdom, Australia, etc. These boons are worth striving for, why reject them ?

One reason given for rejection is : That the regulations relative to matriculation and professional examinations in medicine to be enacted under the Dominion Medical Act would be framed by a Council composed of 35 English and 4 or 5 French-Canadian physicians, so that the latter would have no influence in the preparation or regulation of these standards.

We do not concede this point. Our French Canadian friends are not in general remarkable for an excessive modesty, when privileges are to be obtained, and, even though in a minority on the contemplated Dominion Medical Board, their influence in the regulation of medical standards of education would certainly obtain

a cordial recognition. If the editor of *Le Bulletin Médical* would only read the discussion on the report of the educational committee of the Ontario Medical Council (*vide* Announcement of the College of Physicians and Surgeons of Ontario, 1902-3, page 80) he would see that the high matriculation standard of the College of Physicians and Surgeons of Quebec in medicine was approved of, and furthermore, that the existence of that high standard was used as an argument to raise the matriculation examination of the Ontario Medical Council from a pass matriculation examination to a much more difficult honor matriculation examination.

We do not accept as trustworthy the argument, that McGill University is striving to introduce federalism into Canadian educational affairs, and will become, eventually, the University of the State. McGill University is a strong, very enterprising, and well governed educational institution. Not content with her earnings in Quebec, she strives to win all the students she can in the other provinces, and is, to-day, a most formidable rival to the universities of Ontario. But, even though McGill should take the scalps of more than one Canadian university, she cannot dictate the academic qualifications of candidates for matriculation in medicine who may appear before the Dominion Medical Board, because Laval now holds the key of that position, and can impose her own standard of medical matriculation, which, it may be said without detracting from McGill, would place the medical students of Laval, McGill and Bishop's College on the same academic plane. In fact, the French-Canadian medical profession, through their representatives, the Governors of the Quebec College of Physicians and Surgeons, have an excellent opportunity of imposing their wishes not only on the universities of the Province of Quebec, but also on the rest of their countrymen, who are interested in the success of the Roddick Bill, and it would be most regrettable that they should stand aloof, instead of joining the procession and helping to roll along the chariot of medical progress. The Roddick Bill cannot become law unless adopted by each of the Provinces. Let French-Canadians lay it down as a *sine qua non* that they will give their adhesion to the Roddick Bill on the following conditions: (1) That every candidate presenting himself for examination before the Dominion Medical Council shall have an academic B.A. degree, or as a minimum qualification a certificate that he has passed the first year examination in the Department of Arts of a recognized university: (2) shall have studied four years in a recog-

nized medical school : (3) shall have passed one year as an assistant to a practitioner or as an attendant in a recognized hospital. Is that standard high enough ?

Will the editor of *Le Bulletin Medical* go a step further ? Will he propose to make it obligatory that, to obtain the diploma of the Dominion Medical Board, a candidate must obtain fifty per cent. of the marks on each paper or subject of examination ? If he and his friends will go so far, we do not think that the French-Canadian members of the Dominion Medical Board will lack influence on that Board, and we are satisfied that they will possess a very great influence, indeed, with the 5,417 doctors of Canada.

In one respect the agitation against the adoption of the Roddick Bill by the Quebec Legislature may be beneficial. If it should cause the members of the Council of the College of Physicians and Surgeons of Ontario to demand that a candidate beginning the study of medicine in Ontario shall be a B.A. of a recognized university, then the discussion on the Roddick Bill will have done good to this Province, even though the Bill itself should never become law in Canada.

We cannot close this article without giving the editor-in-chief of *Le Bulletin Medical* a little brotherly advice. It is to the effect that would-be critics should be sure of their ground. The following extract from his article (p. 27, 9th line from the bottom) is unique : " A Bachelor of Arts leaves Toronto University at the age of fifteen or sixteen years, after having obtained one-third of the necessary marks. The course of studies in that institution is incomplete. Very little Latin, little or no Greek, superficial acquirements in Literature, English History, Elementary Science for the senior B.A., and scarcely a glimpse for the junior B.A., and naturally no Moral and Intellectual Philosophy, but a good deal of Mathematics. Needless to say, this is the programme of the High Schools, which everyone knows." To say that a B.A. of Toronto University finishes his Arts course at fifteen or sixteen years is a ludicrous mistake. He may matriculate about that age, but cannot obtain a B.A. degree until he is twenty-one years of age. The editor of *Le Bulletin Medical* probably means to say that the pass matriculation examination of the Arts Department of the University of Toronto, which, for some years, has been accepted as the matriculation examination for candidates desiring to obtain the license of the Ontario College of Physicians and Surgeons, is too low an academic standard for individuals whose subsequent studies are to be purely professional. If

this be a correct expression of his view, then we quite concur in the soundness of his criticism, and as we have already indicated, would join with him in making the first step to the portals of the Canadian temple of Esculapius a B.A. degree. We fear, however, that, even with that concession, Laval University will be irreconcilable.

J. J. C.

ADVANCE, HAMILTON.

HAMILTON is the first municipality in Ontario to take action in the matter of the compulsory notification of cases of tuberculosis to the medical health officer by the practitioners of a city. The Hamilton Medical Society, the Local Board of Health, Dr. Walter F. Langrill, the Medical Health Officer, and the Mayor, Mr. Hendrie, were all in favor of this action being taken. Therefore the Local Board of Health of Hamilton, at its meeting November 3rd, 1902, having duly considered the matter, reported in favor of the passage of the by-law. The by-law was adopted at a meeting of the Hamilton Council, held on November 24th.

It is pleasing to see that the practice of the compulsory notification of tuberculosis is beginning to obtain recognition in Canada. To be successful in a municipality such a reform must first obtain the cordial support of the local medical society. Much, no doubt, depends upon the medical health officer of a local board of health. If, in addition to the love of science and professional ability, he possesses a knowledge of men, and a fair share of the *suaviter in modo*, his influence in assisting the growth of hygiene in his own municipality, and even elsewhere, will be great indeed.

There can be no doubt that hygiene requires the notification of tuberculous cases to the medical health officer if preventive measures are to be effective. Good sense and good feeling must naturally go together in carrying out any rules adopted by the local board of health, after information has been obtained from practitioners about such cases. A sanitary policy, which consists in acknowledging the scientific truth that tuberculosis is a communicable disease, while at the same time neglecting to urge the local board of health to establish and publish regulations for the protection of the well from the sick, either means that the scientific faith of the medical health officer is founded on flimsy speculations, or that, fearing to excite the opposition of interested persons, he deems

it more prudent for his own interests to compromise with his conscience, and, in either case, he neglects his duty.

We congratulate Hamilton on having a medical officer who knows his duty and does not fear to give effect to his convictions. To strengthen the body against tuberculosis in every judicious way—regular exercise, or work, fresh air, nutritious food, moral living—is well, because the power of resistance to the disease is thereby increased. To destroy the seed of tuberculosis in the homes of patients who are dying of it and especially in the houses of persons who have died of it, is equally important for obvious reasons.

Medical science, in so doing, enlightens and leads public opinion, instead of burning incense to expediency. We congratulate Dr. Langrill on the happy results of his energetic and intelligent application of hygienic rules, and we confidently expect that he will be in a position to recount, at a later day, the advantages which have accrued to Hamilton from the beneficent action which he has inspired.

J. J. C.

EDITORIAL NOTES.

The Treatment of Gout.—Through disinclination or necessity, gouty patients do not take enough exercise to produce an active condition of the skin, and the purification of the body through that great cleansing surface is neglected. When a patient cannot take exercise, the hot air apparatus or the Turkish bath may be used with advantage to produce the necessary sweating. Moderation in, or total abstinence from, sexual congress should also be practised by a gouty patient. *Omne animal post coitum triste.* Anything which, by weakening the bodily powers, slows his overslow processes of nutrition, should be avoided by the gouty patient. Of the first importance to a gouty patient is the dietetic treatment of his complaint. In this connection, a paper published in the *British Medical Journal*, June 14th, 1902, by J. Walker Hall gives important information. As a result of his experiments this author concludes that milk, butter, eggs and cheese, as animal foods, “form together our most valuable means of withholding purin substances from the body, and yet allow the provision of a diet at once digestible, easily absorbed, and capable of maintaining nitrogenous equilibrium.” The following table shows the quantities of undried purins as grains per pound in meats, vegetables, and beverages:

	Undried Purins Grains per lb.
Cod.....	4.08
Plaice.....	5.57
Halibut.....	7.14
Salmon.....	8.16
Tripe.....	4.01
Mutton.....	6.76
Veal.....	8.14
Pork (Loin).....	8.49
Pork (Neck).....	3.50
Ham (Fat).....	8.09
Beef (Ribs).....	7.96
“ (Sirloin).....	9.14
“ (Steak).....	14.46
Liver.....	19.27
Sweetbread (Thymus).....	70.43
Chicken.....	9.07
Turkey.....	8.82
Rabbit.....	6.31

VEGETABLES.

Bread (White).....	0.00
Oatmeal.....	3.46
Rice.....	0.00
Peameal.....	2.54
Beans (Haricot).....	4.17
Potatoes.....	0.14
Onions.....	0.06
Tapioca.....	0.00
Cabbage (Green).....	0.00
Lettuce “.....	
Cauliflower “.....	
Asparagus (Cooked).....	1.51

BEVERAGES.

	Grains per pint.
Lager Beer.....	1.10
“ Drink.....	0.16
Pale Ale.....	1.27
Porter.....	1.36
Claret.....	0.00
Volnay.....	
Sherry.....	
Port.....	

No mention is made of tea and coffee, but the use of either of them causes an increase in the purins.

The Value of Buttermilk in Infant Feeding.—Dr. Baginsky, Professor of Children's Diseases at the University of Berlin, read a paper at the Seventieth Annual Meeting of the British Medical Association at Manchester, July 30th, 1902, highly approving of the feeding of infants with prepared buttermilk. In this author's opinion the great value of buttermilk is revealed in *the acute cases of dyspepsia up to the severe grades of enteritis, with vomiting and diarrhea.* It should not be given at the height of an attack when

temperature is high, vomiting severe, and prostration great. After giving the intestinal tract a rest prepared buttermilk is well borne, even in severe cases. Baginsky cannot explain the cause of the healing properties of buttermilk. He testifies that it is well taken and well borne by children of all ages, from birth to the end of the second year, and that the youngest take it as well as the oldest. The improvement in sick infants from the use of buttermilk is noticed in the stools, which become pasty and lose their odor; secondly by the gain in the weight of the children; and thirdly in their general appearance, for they become good-natured, smiling, and friendly. Baginsky offers a tentative explanation of the increase of weight in the children as being due to: (1) A large absorption of water; (2) a probable increase in tissue weight. He uses buttermilk made from pure cream, which is soured by means of bacteria producing a lactic acid fermentation. The fat is extracted to a minimum (0.3 to 0.5 per cent.). This product is delivered as soon as it is finished. The buttermilk thus obtained is treated as follows: To one litre, 15 to 25 grams of wheat flour, and 35 to 50 grams of cane sugar are added. With constant stirring it is allowed to boil for at least two minutes. The milk is then poured into sterilized bottles, stoppered by means of cotton, and kept in an ice-box till required. At the time of feeding they are placed in water at the body temperature. The following analyses, made in Baginsky's laboratory, show that prepared buttermilk is, *a priori* far from resembling the ideal infant food:

	Fat. Per cent.	Albumen. Per cent.	Sugar. Per cent.	Starch.	Acidity.	Calories.
Woman's Milk.....	3.5	1.02	7			655
Prepared Buttermilk	0.35	3.4	*4.2 to †5.78	0.26	60 to 80	597
Cow's Milk.....	3.4	3.0	4.5			625
		* Milk.	† Cane.			

Massive Doses of Mercury Introduced Hypodermically in Syphilis.—At the Congress of French-speaking physicians, held at Quebec last June, Dr. Leredde, Paris, read a paper on the hypodermic use of different mercurial salts in syphilis (*vide Le Bulletin Medical de Quebec*, October, 1902). He thought that the efficiency of a mercurial salt in syphilis depended on the proportion of mercury contained in it. Mercuric cyanide contains 79 per cent. of mercury; mercuric chloride 73 per cent.; biniodide of mercury 44 per cent.; benzoate of mercury 45 per cent. He favored larger doses of these salts than those which are generally

used by practitioners in treating syphilis by the hypodermic method. Thus he had injected 3 centigrammes of mercuric cyanide per diem, in a case of syphilis of the nervous system instead of the usual dose, one centigramme (about .46 of a grain of mercuric cyanide instead of .15 of a grain). The same energetic method he thought applied equally to forms of syphilis, other than those affecting the nervous system. The practitioner should push the remedy, the largest possible dose of mercury being introduced into the organism at each injection. Calomel contains 84.9 per cent. of mercury. Dr. Leredde had used calomel subcutaneously in doses of 10 centigrammes (about 1-2 grains), giving the second injection sixteen days after the first, the third six days after the second, and the fourth five days after the third. Calomel injections are followed by severe local and general symptoms, showing that the drug is rapidly absorbed. During this treatment the state of the patient's kidneys requires to be inquired into. He thought that the method prescribed was the best possible. Intravenous hypodermic injection of mercury was yet on trial. Dr. Leredde does not mention the necessity of attending to the condition of the patient's oral cavity during treatment; but, doubtless, this is an oversight. The principal value attached to Dr. Leredde's utterances is due to the fact that curative results have been obtained by his method in locomotor ataxia, and also in general paralysis. Dr. Leredde asks if Professor Fournier's doctrine, that these diseases, though para-syphilitic are incurable, is not due to the fact that they have been inefficiently treated. "In general paralysis, as in locomotor ataxia, a history of syphilitic infection is obtained in a large majority of all cases" (Anders). Should a thorough application of Leredde's treatment prove curative in these diseases, some important changes and corrections will be required in modern text-books on the Practice of Medicine.

J. J. C.

Migraine or Megrim.—Both migraine and megrim, the one a French, the other an English word, are derived from Low Latin *hemigrania*, Latin *hemicrania*, Greek *ημικρανία*—*ημι*, half, and *κρανιον*, skull, and mean the same thing, *i.e.*, paroxysmal circumscribed headache, associated with visual, vaso-motor and gastric disturbances. As any one can see, megrim has about as clear a title to a Greek derivation as migraine; and, as it has long enjoyed a recognized place in English literature, it should be preferred to migraine by those who use the English tongue.

Items of Interest.

Polk's Medical Register.—The eighth revised edition of this well-known work is now under way, and will appear in due time. Send for descriptive circulars, and do not be deceived by imitators. Polk's Medical Register and Directory has been established sixteen years. R. L. Polk and Co., Publishers, Detroit, Mich.

A New Nursing Mission House.—A house at 55 Beverley Street, has been given by Mr. Goldwin Smith to the Nursing Mission, and was taken possession of on the 4th ult. The superintendent, three nurses, and a servant went from the Hayter Street house. The Mission Union purposes conducting the nursing at the old quarters on Hayter Street.

Medical Council Elections.—The elections to the Ontario Medical Council will take place on December 2nd, but some of the interest is eliminated by the fact that out of seventeen divisions representatives have been elected for thirteen. The following delegates will represent their districts, in the Council: No. 1, Dr. Bray, Chatham; No. 3, Dr. McArthur, London; No. 4, Dr. Robertson, Stratford; No. 5, Dr. Brock, Guelph; No. 6, Dr. Henry, Orangeville; No. 7, Dr. Stuart, Milton; No. 8, Dr. Glasgow, Welland; No. 11, Dr. Macdonald, Toronto; No. 12, Dr. Sangster, Bowmanville; No. 13, Dr. Hillier, Port Perry; No. 14, Dr. Thornton, Consecon; No. 15, Dr. Spankie, Wolfe Island; No. 16, Dr. Lane, Mallorytown. The remaining four districts in which a contest takes place on December 2nd, are: No. 2, Drs. Williams and Mearns; No. 9, Drs. Aylesworth, Gibson, and Hanly; No. 10, Drs. E. E. King and C. J. Hastings; No. 17, Drs. R. W. Powell and Dr. M. Klotz.

New Appointments at Toronto University and School of Practical Science.—The Provincial Cabinet met on the 4th ultimo, and made the appointments for the Toronto University for the ensuing year. Those marked with an asterisk are new appointments: Demonstrator in Anatomy, F. N. G. Starr, M.B.; Assistant Demonstrators in Anatomy, C. L. Starr, M.B., W. J.

McCallum, M.B., W. J. O. Malloch, B.A., M.B., S. H. Westman, M.B., G. R. Hooper, B.A., M.B., W. H. Pierson, B.A., M.B., *A. C. Hendrick, B.A., M.B., *A. J. Mackenzie, B.A., M.B., W. J. Wilson, M.B., *D. McGillivray, M.B. Demonstrators in Pathology: *G. Silverthorn, M.B., *C. J. Wagner, M.B. Assistant Demonstrators in Pathology: *T. D. Archibald, B.A., M.B., *F. A. Clarkson, M.B., *M. M. Crawford, M.B. School of Practical Science—Demonstrator in Mechanical Engineering: *Harold G. McVean; Fellow in Mining Engineering, *Jas. G. McMillan; Fellow in Electrical Engineering, *Max V. Sauer; Fellow in Mechanical Engineering, John A. Craig; Fellow in Civil Engineering, *W. C. Tennant; Fellow in Surveying, *E. V. Neelands; Fellow in Chemistry, Edward G. R. Ardagh; Fellow in Drawing, *Albert H. McBride; Lecturer in Applied Mechanics, *J. McGowan; Lecture Assistant in Chemistry, *Maitland C. Boswell.

A Dangerous Swindler.—For nearly a year past, many of the doctors and dentists of this country have been victimized by a very clever swindler, who has passed under several aliases among them—R. G. Stearns, R. L. Nelson, and others. He claims to represent The Success Company, publishers of the Success Magazine, and takes orders for numerous magazines comprised in the Success Clubbing Offers. He works very rapidly, jumping from town to town, and always among doctors and dentists. All the money he obtains is appropriated, and the magazines are never ordered or received. Every effort has been made by the Success Company to apprehend this swindler, but so far without success. The Success Company requests us to notify all doctors and dentists that its representatives always bear a special dated card of introduction, and to patronize no others. It also offers a reward of \$50.00 for any information which will lead to the apprehension of this swindler. He is described as follows:

From 23 to 25 years old; 5 ft. 9 in. in height; medium build; weight about 150 lbs.; dark hair (almost black) of medium length, very curly about the temples; dark gray eyes (almost hazel); rather sallow complexion, with scattered dark brown freckles; face unusually round for man of so light build; clothes not shabby, but far from new, and much worn. Black coat and vest, gray trousers (hard twisted goods), with small stripe; black Derby hat, much worn; old style turn-down collar, with made tie. General untidy appearance for a man in the soliciting business.

Obituary

DEATH OF DR. D. McLARTY.

ON the 7th ult. the town of St. Thomas lost, by the death of Dr. D. McLarty, one of the best known and most highly respected citizens. Dr. McLarty had been for a year suffering from an ailment which the best medical skill advised could only be successfully healed by a surgical operation. The operation was thought to have been successfully performed at the Buffalo General Hospital the previous week, but unfortunately the strains of a year's illness had told too heavily upon his system, and he passed away a little after noon on November 7th. He was born in 1839, graduated in London and Edinburgh in 1867, and began the practice of his profession here in the latter year. He was twice Mayor of St. Thomas, and the only reason he was not elected to Parliament was that he would not accept a nomination, although again and again urged by his Liberal friends to do so. He was a director of the Atlas Loan Co., was one of the provisional directors of the Elgin Loan Co., when it was established twenty-three years ago, and nine years ago was elected president of the company, a position he held with honor to himself and advantage to the company ever since. He leaves a widow, one daughter, and two sons.

THE SUDDEN DEATH OF DR. J. MOORE HART, OF TORONTO.

Word came from Huntsville on November 11th of the death from paralysis of Dr. J. Moore Hart, 232 Shaw Street, who was a member of a hunting party along with Dr. Chas. Trow and Mr. E. E. Trow, barrister, of Toronto.

Two weeks previously the party set out for the north. They encamped some twelve miles overland from Dorset, and had some excellent sport. On Monday evening, twenty-four hours before

he died. Dr. Hart's companions were jocularly censuring him for burning so much dry wood, and he explained that green wood should be burned, and volunteered to cut down a green tree.

The exertion of chopping the tree made him feel dizzy, and Dr. Trow had some difficulty in getting him back to camp. He shortly afterward became unconscious, and later in the evening died. The bursting of a blood-vessel in the brain resulted in paralysis, which caused death. Last spring Dr. Hart had a very severe hemorrhage.

He was fifty-two years of age, the son of the late Robert Hart, of Wilfrid. He graduated in 1871 from the Trinity Medical College before he had yet attained his majority. He had been in practice for thirty-one years, twenty-two of which were spent in Cannington and nine in Toronto. Dr. J. S. Hart, of Parkdale, is a cousin of the deceased, and Rev. Dr. A. B. Chambers a brother-in-law. The deceased leaves a widow and one son, Garnett, aged ten. A brother, Robert, is the sole surviving member of a large family, and lives at the old homestead at Wilfrid.

Dr. Hart was a member of the Chalmers' Presbyterian Church. He was a Liberal in politics, and a Past Master of Broek Lodge of Masons in Cannington. Dr. Hart had a large practice, and was highly esteemed. He was a member of the staff of the Western Hospital.

The funeral took place at the homestead at Wilfrid, on Friday morning, November 14th.

DEATH OF MR. GEORGE BRYCE.

MR. GEORGE BRYCE, of Mount Pleasant, Brant County, died Monday November 17, 1902, in his eighty-sixth year. The funeral, which took place on the following Thursday (20th ult.), was largely attended. Mr. Bryce was the father of Dr. P. H. Bryce, Secretary of the Provincial Board of Health, Toronto; of Rev. Dr. Bryce, Moderator of the Presbyterian General Assembly of Canada, and Founder and Principal of Manitoba Presbyterian College, Winnipeg; of Mr. Alexander Bryce, of the Hygienic Dairy, Toronto; of Dr. John Bryce, of Erie, Penna., and of Mrs. (Dr.) Marquis, of Brantford. He came to Canada from Doune, Scotland, when quite young, and had resided near Brantford ever since. We extend our sympathies to the bereaved family.

The Physician's Library.

BOOK REVIEWS.

Human Anatomy. A Complete, Systematic Treatise by Various Authors, including a Special Section on Surgical and Typographical Anatomy, edited by Henry Morris, M.A., M.B. London; F.R.C.S. England; Member of the Council (lately Vice-President) of the Royal College of Surgeons of England; Chairman of the Court of Examiners of the Royal College of Surgeons of England; Senior Surgeon to the Middlesex Hospital, London; Hon. Member of the Medical Society of the County of New York; Hon. Member of the American Urological Society; late Lecturer on Anatomy and Lecturer on Surgery at the Middlesex Hospital, London; late Examiner in Anatomy in the University of Durham; Examiner in Surgery in the University of London. Illustrated by 846 wood cuts, the greater part of which are original and made expressly for this work by special artists; 266 printed in colors. Third edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1902. Canadian Agents: The Chandler Massey Co., Limited, Toronto and Montreal.

It is frequently the case that authors, when getting out a new edition of their work, make a claim that they have carefully revised what had previously been written (besides making many additions); whereas, in reality, they have only revised some of the chapters, leaving the remaining ones as they were. In the third edition of Morris' Anatomy, this is not the case, as the author has revised his volume practically from cover to cover, besides adding a great deal of new material, both in the text and illustrations, many of the latter being in colors, and thus adding immensely to the value of the work. In comparing some of the drawings with those in the second edition, we find that the author has very wisely had them re-drawn by the artist, so as to make them even more strictly correct than before. The feature, which was also found in the last edition, viz., the paragraphs dealing with variations and abnormalities, also applies to the third edition, and has been extended at greater length. One point about this splendid volume (it cannot be otherwise termed) is that the author has all through the different sections borne in mind the important relation between descriptive anatomy and the practice of surgery, especially in the

section on typographical anatomy, so that the book is, besides being suitable to the needs of the medical student in his work on the cadaver, an ideal one for reference by him in later years, when engaged in the active work of his profession as a surgeon.

W. A. Y.

A Dictionary of Medical Science. Containing a full explanation of the various subjects and terms of Anatomy, Physiology, Medical Chemistry, Pharmacy, Pharmacology, Therapeutics, Medicine, Hygiene, Dietetics, Pathology, Bacteriology, Surgery, Ophthalmology, Otology, Laryngology, Dermatology, Gynecology, Obstetrics, Pediatrics, Medical Jurisprudence, Dentistry, Veterinary Science, etc. By ROBLEY DUNGLISON, M.D., LL.D., late Prof. of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, etc. Twenty-second edition, with appendix. Thoroughly revised and greatly enlarged, and with the pronunciation, accentuation, and derivation of the terms, by RICHARD J. DUNGLISON, A.M., M.D. Philadelphia and New York: Lea Brothers & Co. 1900.

The twenty-second edition of this world-famed work will be received with pleasure by those who are familiar with the previous editions, and this pleasure will be magnified when they note the thorough revision and many additions which this reissue contains. It needs very little recommendation from us, as it has been recognized for many years as a dictionary of the highest order. But we wish to take this opportunity to note that this edition, containing about 15,000 new words, has kept pace with the rapid strides of medicine. It is so broad in its object that the dentist and veterinarian can refer to it with confidence. The author has indeed made it an epitome of the existing conditions of medical science by combining the pronunciation, accentuation, and derivation of each word. We can assure the editor that the trust confided in him by the author has not been misplaced, and we compliment him on the result of his labors; nor must we forget the publishers, Lea Brothers & Co., of Philadelphia and New York, who have succeeded in giving to the medical world such a finished and indispensable addition to their libraries.

W. H. P.

Anatomy and Histology of the Mouth and Teeth. By I. NORMAN BROMMELL, D.D.S., Professor of Dental Anatomy, Dental Histology, and Prosthetic Technics in the Pennsylvania College of Dental Surgery, Philadelphia. Second edition, revised and enlarged, with 337 illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1902. Canadian Agents: Chandler Massey, Limited, Toronto and Montreal.

The first edition of this book was published about four years ago, while the latest edition bears the date of August, 1902. Fifty-three new illustrations have been added, all of which are

the original work of the author. A chapter dealing with "Embryology of the Mouth" has been added, as has also a short chapter on the Anomalies of Tooth-Form and Structure. Some slight changes have been made in the description of the teeth. The terms "Superior and Inferior" having been changed to "Upper and Lower," and the term "Palatal," as applied to one of the tooth surfaces, has been discarded, and the word "Lingual" has been substituted.

So much progress in nearly every branch of dental education has been made of late years that it is necessary for a work of this kind to be thoroughly up-to-date, and this book of 450 pages certainly presents systematically a comprehensive knowledge of the part of the human anatomy which comes directly under the care of the stomatologist. Much space has been devoted to surface anatomy of the individual teeth. Thirteen chapters are devoted to anatomy of the mouth and teeth, half as many more to histology, including embryology. The paper and illustrations are excellent. The work is well bound, and is published at \$4.50. Those who know Professor C. N. Peirce, of the Pennsylvania Dental College, Philadelphia, will be pleased to know that this handsome work is dedicated to him as a souvenir of long and valued friendship, and a testimony of esteem for his professional and private worth.

E. H. A.

A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc., assisted by H. R. M. LANDIS, M.D., Assistant Physician to the Out-Patient Department of the Jefferson Medical College Hospital. Volume III., 1902: Diseases of the Thorax and its Viscera, including the Heart, Lungs, and Blood Vessels; Dermatology and Syphilis; Diseases of the Nervous System; Obstetrics. Philadelphia and New York: Lea Brothers & Co. 1902.

Dr. Ewart devotes 122 pages to the presentation of recent views on diseases of the thorax and its viscera. He makes a good presentation of the views, sometimes conflicting, of physicians as to the management of severe forms of pneumonia. Differences among experts are, of course, permissible; but, as the writer shows, current opinion points to the support of the patient's strength during the three stages, and the combating of dangerous symptoms, which arise with the complications.

Advances in the ever-widening field of tuberculosis are noted. Something that will please the older practitioners is a reference to Dr. H. W. Syers' views on the faults of the binaural stethoscope, preference being given to the old-fashioned, rigid, perforated article. Dr. Gottheil's article on Dermatology and Syphilis con-

tains a number of matters of considerable interest to general practitioners, among which may be mentioned Griffith's treatment of burns.

Dr. Spiller devotes 107 pages to the Diseases of the Nervous System. Physicians interested in that class of disease will find references to important advances and findings noted and recorded.

Dr. Norris devotes 92 pages to Obstetrics. Among other important subjects treated we notice a full reference to eclampsia. This article will be useful to obstetricians who wish to know the latest views on so important a subject.

J. J. C.

The Artificial Feeding of Infants: Including a Critical Review of the Recent Literature of the subject. By CHARLES F. JUDSON, M.D., Physician to the Medical Dispensary of the Children's Hospital, and I. CLAXTON GITTINGS, M.D., Assistant Physician to the Children's Hospital. Philadelphia: J. B. Lippincott & Co. 1902. Canadian Agent: Chas. B. Roberts, 593a Cadieux Street, Montreal.

This handsome and readable little volume purports to contain gleanings from the best periodicals, monographs, and text-books, published between 1894 and 1901, and contains, therefore, the substance of a very large number of valuable articles. It goes thoroughly into the "milk and artificial food" question, and gives the reader a very good idea of the reasons why certain foods should be used under certain conditions. Much of the material is new, and of undoubted value. The book is one that should be read by every general practitioner and pediatricist, as it contains, in addition to the material above mentioned, a very valuable article descriptive of the constituents of the various artificial foods on the market

A. J. J.

The Practitioner's Guide. By J. WALTER CARR, M.D., London, F.R.C.P. Physician Royal Free Hospital; Physician Victoria Hospital for Children; Joint Lecturer on Medicine London (Royal Free Hospital) School of Medicine for Women. T. PICKERING PICK, F.R.C.S., Consulting Surgeon St. George's Hospital and Victoria Hospital for Children; ALBAN H. G. DORAN, F.R.C.S., Surgeon to the Samaritan Free Hospital; and ANDREW DUNCAN, M.D., B.S. London; F.R.C.S. and M.R.C.P.; Physician Branch Hospital Seaman's Hospital Society; Joint Lecturer on Tropical Medicine at London School of Tropical Medicine; Physician Westminster Dispensary; Fellow of King's College, London. London, New York, and Bombay: Longmans, Green, & Co., 39 Paternoster Row, London. 1902. Canadian Agents: J. A. Carveth & Co., Toronto.

The purpose served by a work of this character is a most important one. A busy practitioner has frequently too little time to consult a text-book, especially when all he may wish to do is to refresh

his memory on one or two points. The Practitioner's Guide, as its name would indicate, is a book of reference, and should be found most useful as such, and might almost be termed a *vade mecum*. It is practical, and, without going into the pathology or etiology of the different diseases, gives the reader in a short space just what he wants to assist him in his active work. Diseases of women are dealt with at some length, as also Tropical diseases. Surgery has not been by any means overlooked; but, on the other hand, has been gone into only so far as the general practitioner is interested. The volume covers about 1,100 pages. It is arranged alphabetically and in double column. We think it would have been wiser, however, had the publishers used larger type, even had the book been a little more bulky.

Manual of Gynecology. By HENRY T. BYFORD, M.D., Professor of Gynecology and Clinical Gynecology in the College of Physicians and Surgeons of Chicago; Professor of Gynecology in the Post-Graduate Medical School of Chicago, and in the Chicago Clinical School, etc. Third revised edition, containing 363 illustrations, many of which are original. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1902. Canadian Agents: The Chandler Massey Co., Limited, Toronto.

The objection to by far the larger percentage of medical works published nowadays is that the authors forget that they are compiling facts not by any means solely for specialists, but more for general practitioners who desire a book that is not too cumbersome, and yet at the same time suited to their purpose, one that does not go into too great detail, with long descriptions and cuts of operations which they might not perform once in half a lifetime; but, on the other hand, a work that gives accurate and concise facts of every-day experience. Such a volume, it may fairly be said, is Dr. Byford's Manual of Gynecology. At the top of every second page will be found, for instance, the part and chapter to which the page belongs. The marginal notes, too, are full and explicit, and will be found to considerably aid the reader in his study. The author has carefully revised each chapter, so that the volume as a whole is a very considerable improvement on that of seven years ago.

Donovan Pasha. By GILBERT PARKER. Toronto: The Copp, Clark Company, Limited.

We almost begrudge the pen of Gilbert Parker to be put to the task of describing "Donovan Pasha and Some People of Egypt." He seems to us to belong, soul and pen, to the *habitants* of Lower Canada, and in his keen insight into their character, and his facile and marvellous power of making them live and speak in page and story, he stands without a peer. In his new work he has done well, the chapter entitled, "On the Reef of Norman's Woe,"

in which he describes the awful scourge of cholera, the wily fight against the plague by the three Englishmen, and the sullen, devilish opposition of the natives against the enforcement of sanitary regulations, is a masterpiece in its way. Kipling, of course, has been the lord paramount of the tellers of the story of Egypt, consequently the venture of Gilbert Parker seems a bit audacious, as he speaks also of soon publishing a longer Egyptian story, so it seems to be between Kipling the inimitable and Parker the courageous, like the old Scotch song, "I'll take the high road and you'll take the low road, and I'll be in Scotland afore ye," if the race to Sphinx-land is to the swift.

W. A. Y.

Atlas and Epitome of Traumatic Fractures and Dislocations.

By PROFESSOR DR. H. HELFERICH, Professor of Surgery at the Royal University, Greifswald, Prussia. Edited, with additions, by JOSEPH C. BLOODGOOD, M.D., Associate in Surgery, Johns Hopkins University, Baltimore. From the fifth revised and enlarged German edition. With 216 colored illustrations on 64 lithographic plates, 190 text-cuts, and 353 pages of text. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, \$3.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

During past years we have taken the opportunity of expressing our approval of publishers giving the profession, to as great an extent as possible, the benefit of illustrations in large numbers in order to elucidate the text of any particular work. The Atlas idea cannot be improved upon, and is a splendid addition to medical literature. One of the best of Saunders' Medical Hand Atlases is Dr. Helferich's Atlas of Traumatic Fractures. The colored plates are really splendid, and in themselves impress upon the reader exactly what is meant, and in a manner that the mere reading of the text cannot convey. An atlas of this kind often proves invaluable to the practitioner as a ready reference book, and at a glance serves to show the anatomic relations of fractured parts, and consequently the diagnosis and necessary treatment. We congratulate the author upon his labors, as also Mr. Saunders on this added laurel.

Surgical Principles and Diseases of the Face, Mouth, and Jaws.

A Text-Book of the Surgical Principles and Surgical Diseases of the Face, Mouth, and Jaws. For Dental Students. By H. HORACE GRANT, A.M., M.D., Professor of Surgery and of Clinical Surgery, Louisville College of Dentistry, Louisville. Octavo volume of 231 pages, with 68 illustrations. Philadelphia and London: W. B. Saunders & Co. 1902. Canadian Agents: J. A. Carveth & Co., Toronto.

This book is specially designed by the author for dental students, and is well calculated to fulfil this object, as it is not so prolific in detail as to be too comprehensive and extensive for the

student during his college course. While this applies more particularly to the Dental student, it is an almost equally useful work to the medical student, and indeed also for the general practitioner both of dentistry and medicine who is interested in such surgical lesions as are likely to require diagnosis and perhaps treatment by the dentist, as well as the physician. The illustrations are numerous, and especially those relating to tumors of the head and face. Emergency work is treated rather briefly, and there are short chapters on Bacteriology and Surgical Principles, Inflammation, Ulcerations, Gangrene, Pyemia, Surgical Diagnosis, Anesthesia, Wounds, Hemorrhage, Syphilis.

E. H. A.

General Paresis: Practical and Clinical. By ROBERT HOWLAND CHASE, A.M., M.D., Physician-in-Chief Friends' Asylum for the Insane; late Resident Physician State Hospital, Norristown, Pa.; Member of the American Psychological Association; Fellow of the College of Physicians, Philadelphia. Illustrated. Cloth, \$1.75. Philadelphia: P. Blakiston's Son & Co. 1902. Canadian Agents: Chandler Massey, Limited, Montreal and Toronto.

Since Dr. Mickle wrote his classic work, there has perhaps been no other which so fully and at the same time entertainingly depicts the multiform morbid manifestations of both body and mind in general paresis as this handsome little book by Dr. Chase. He treats the whole subject in a clear and comprehensive way, and succeeds admirably in bringing out all the facts. He also takes great care to present the relative importance of the various symptoms described, and throughout the whole work he maintains such an excellent sense of proportion in everything that at the end the reader feels he has, without much effort, acquired a fair acquaintance with this most interesting subject.

N. H. B.

The Treatment of Fractures. By CHAS. L. SCUDDER, M.D., Assistant in Clinical and Operative Surgery, Harvard Medical School. Third edition, revised and enlarged. Octavo, 480 pages, with 645 original illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Polished Buckram, \$4.50 net; half Morocco, \$5.50 net. Canadian Agents: J. A. Carveth & Co., Toronto, Ont.

Dr. Scudder's work on fractures is already well known to the profession, the present being the third edition. As there are formidable rivals in the field this fact is another indication of the value of his book. Perhaps its most noticeable feature is the large use of illustration in showing injuries to bones and different methods of treating the same. There can be no doubt that this lavish use of illustration is helpful and efficient. To see in such cases is to understand. There are 645 illustrations in this work.

In this edition full reference is also made to gun-shot fractures

of the long bones. The experience of army surgeons has been drawn upon, and the reports of their cases exhibiting the effects of small calibre bullets in causing fractures of bones digested and presented to the reader.

J. J. C.

The Medical Record Visiting List and Physicians' Diary for 1903.

New Revised Edition. New York: William Wood & Company, Publishers.

This is a most useful List, a veritable *multum in parvo*. It contains a Calendar, Table for Estimation of Pregnancy, Equivalents of Temperature, Weights and Measures, etc. A table of maximum adult doses by the mouth, in both English and metric systems. Table of drops in a drachm. Solutions for hypodermic injection, and also for atomization and inhalation. Treatment of poisoning, signs of death, and hints on making wills. Besides the daily list and special memoranda, there are spaces for obstetric engagements, consultations, vaccinations, death register, addresses of nurses and others, and at the back a space for cash accounts. The List is handsomely bound in red Morocco leather, is gilt edged, and contains a pocket and pencil. It is the smallest and most convenient List we have seen.

W. J. W.

A Magazine Thirty Years Old. The Christmas (December) number of *The Delineator* is also the Thirtieth Anniversary Number.

To do justice to this number, which for beauty and utility touches the highest mark, it would be necessary to print the entire list of contents. It is sufficient to state that in it the best modern writers and artists are generously represented. The book contains over 230 pages, with 34 full-page illustrations, of which 20 are in two or more colors. The magnitude of this December number, for which 728 tons of paper and six tons of ink have been used, may be understood from the fact that 91 presses running 14 hours a day, have been required to print it; the binding alone of the edition of 915,000 copies, representing over 20,000,000 sections which had to be gathered individually by human hands.

Saunders' Question Compend, No. 24. Essentials of the Diseases of the Ear, prepared especially for Students of Medicine and Post-Graduate Students. By E. B. GLEASON, M.D., Clinical Professor of Otology, Medico-Chirurgical College, Philadelphia. Third edition. Philadelphia and London: W. B. Saunders & Company. 1902. Price, \$1.00. Canadian Agents: J. A. Carveth & Co., Toronto.

While not an ardent admirer of question compends, the reviewer must confess to having been pleasantly surprised in this one. Brevity is not the only feature—accuracy has not been sacrificed to it. One finds out-of-the-way information not expected in works of this kind. It is distinctly superior to most of this class.

J. M. M.

Merck's Index. Second edition. E. MERCK, Darmstadt, Germany.

It is now five years since Herr Merck issued the first edition of his reference book. It has been appreciated by the profession, and found quite helpful, being adapted to the requirements of medical men. The book gives concise yet exhaustive information on modern *materia medica*. Doses, latest indications for the administration of different remedies, and etymological notes are given considerable space. The volume also contains information as to special test solutions, solutions for clearing, fixing, hardening, staining, embedding, and mounting microscopical specimens, as well as stains and dyes for microscopic work. It is probable that an English translation will be issued in the course of 1903.

The Medical News Visiting List, 1903. Thirty patients per week. Philadelphia and New York: Lea Brothers & Co. 1902.

It is now some years since Lea Brothers & Co. commenced to issue their Visiting List; but it is safe to say that none that has reached the profession so "fills the bill" as that for 1903. A practitioner must of necessity have something of this kind in which to record his work as he "goes his rounds," and we feel that the majority of medical men will find the Medical News Visiting List in every way up to date, containing in addition a great deal of information as to urine examination, artificial respiration, table of doses, important incompatibles; how to find the day of confinement, table of eruptive fevers, signs of dentition.

W. A. Y.

"*Home Nursing.*"

We have recently received a book entitled "Home Nursing," published by the Davis & Lawrence Co. (Limited), Montreal. This publication contains practical instructions for the performance of all offices pertaining to the sick. It tells what to do in case of accidents, treats with nearly all the diseases to which human flesh is heir, as well as containing many recipes for preparing solid and liquid food for the sick. No home should be without a copy of it. It is a very attractive book, about fifty pages, and can be obtained upon application to the publishers, Davis & Lawrence Co. (Limited), Montreal, enclosing to them 5c in stamps to cover the expense of mailing, etc.

The Physician's Visiting List (Lindsay & Blakiston's) for 1903. Fifty-second year of its publication. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.

This Visiting List is a small, well-bound pocket-book, with leather cover, gilt edges, tuck, pocket, and rubber-tipped pencil, made up to hold twenty-five patients' records per day, week, or month, dated, with pages for memoranda and tables for reference. It is a simple statement of a year's work. A useful book for the physician.

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